

**YASKAWA**

**YASKAWA Report**

**2018**

# Moving Toward Realization of Revolutionary Industrial Automation with “Motors and Their Applications”

Since its founding in 1915, Yaskawa Electric has set motors and their applications as its business domain, and continued to support the cutting-edge industries of the times with its products and technologies. From “motor manufacturer” to “automation provider,” we gave birth to the now universally accepted concept of mechatronics\*, and now we evolved to a “total solution provider.”

Global demographic changes, environmental issues caused by increases in energy consumption, transformation in the manufacturing scene caused by rapid evolutions of information technology—dramatic changes are now happening in the business environment that surrounds our Group.

Seeing these changes as opportunities, our Group will create new products and services to provide new values to society by integrating open innovation and our core technologies (motion control, robotics technology, power conversion). We identify this as our objectives for 2025 and are striving for realizing it.

\*Yaskawa Electric led the world in putting forward the term “mechatronics” in the late 1960s. This concept evolved when we combined our customers’ machinery with Yaskawa’s electronic products to create superior quality and function.

## Sustainable Development Goals

Sustainable Development Goals (SDGs) were adopted by the United Nations General Assembly in September 2015 as a social issue for which the global community should make efforts. Out of the 17 development goals of the SDGs, goals related to our business initiatives will be pursued to achieve through new value creation.



## Financial Period Covered

This report covers FY2017 (From March 21, 2017 to February 28, 2018\*), but some FY2018 content is also included.

\*In FY2017, the accounting period changed from March 20 to the last day of February.

## Editorial Policy

This report has been compiled with the intent to communicate broadly the future potential of Yaskawa for its shareholders, investors, and a wide readership, and care has been taken to enable prompt understanding of its value creation from various perspectives in a balanced manner.

For FY2018 issue, the report is created with a focus on making it useful for all stakeholders to evaluate Yaskawa, conveying the overall picture how it creates values, using the International Integrated Reporting Framework by IIRC, as a reference.

## Note on Numerical Values and Graphs

All numerical values are rounded down, as applicable.

## Note on Forecasts Mentioned in this Report

Future projections for performance and other matters contained in this report are based on the information that is available at the time of issue and on a certain level of requirements as seen rational, however, actual results may vary due to various factors.

Some examples of such factors are economic conditions, both in Japan and outside the country, trends in demand for the company’s products and services, and trends in foreign exchange and stock markets. Please also note that factors which may impact the company’s results are not limited to the aforementioned.

# Long-Term Business Plan “Vision 2025”

## Mechatronics

Achieve revolutionary industrial automation, through combination of world’s leading edge technologies and open innovation.



## Humatronics

Create a society where people’s capabilities are maximized, through the application of mechatronics technology to medical/welfare segment.



## Clean Power

Provide safe and secure living in a sustainable society.



<b>Our Goal</b>	<b>Respect Life</b>	We aim to contribute to improving quality of life and building a sustainable society with technologies accumulated over the past century.
	<b>Empower Innovation</b>	We venture in new technologies/domains/targets to bring “Waku-Waku” * excitement to people.
	<b>Deliver Results</b>	We promise to deliver assured results to stakeholders, while continuously enhancing business execution capabilities.

\* Waku-Waku: Onomatopoeia used in Japanese language to express someone’s feeling of enthusiasm

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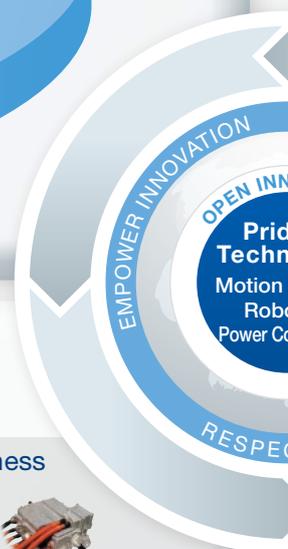
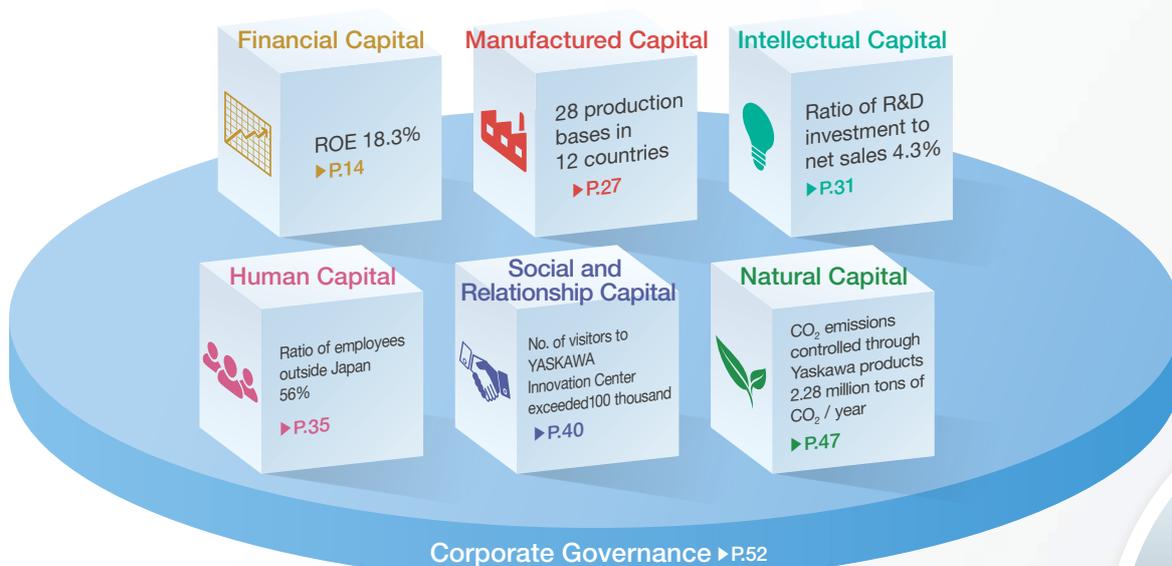
# The Value Creation Process for Realizing Long-Term Business Plan “Vision 2025”

Yaskawa Electric is leveraging the business capital that it has accumulated more than a hundred years and implementing the business strategy to realize Vision 2025.

Through this initiative, we are both realizing sustainable growth and creating social values—improvements in labor productivity, reductions in the burden on the environment, and improvements in people’s quality of life—, and tying that in to realizing its principle of management.

## Leveraging Our Business Capital

We are leveraging the business capital that has been nurtured more than a hundred years for value creation.



- Develop organizational capabilities
- Progress “glocal” management
- Develop individual capabilities



### Establish energy creation/storage/application business

Develop business globally in the areas of photovoltaic and large-scale wind generation and EV powertrain



### Pursue world No.1 in core business Deliver revolutionary industrial automation

Initiatives aimed at realizing solution concept “i<sup>3</sup>-Mechatronics”

**i<sup>3</sup>-Mechatronics**



### Challenge in medical/welfare market

Commercialization through open innovation including alliances and industry-academia-government collaboration



## Promoting Our Business Strategies

We are making efforts to create new value through the deployment of our business based on our core technology, and strengthening our business foundation to ensure maximum return.

Through the execution of our business initiatives,  
we will offer value to our stakeholders.

## Creating Social Values

### Realization of management principles

Leverage the pursuit of our business to contribute to the advancement of society and the well-being of humankind.

#### Mitigation of environmental impact



#### Improvement in labor productivity



#### Improvement in people's QOL\*



\*Quality of life



### Financial goals for FY2025

■ Net sales	Double FY2015 level* or more	*FY2015 net sales: 411.3 billion JPY
■ Operating income (ratio)	More than 100.0 billion JPY (10% or more)	
■ Dividend payout ratio	Above 30%	
■ ROE	13% or more	

Provide safe and secure living in a sustainable society.

Achieve revolutionary industrial automation, through combination of world's leading edge technologies and open innovation.

Create a society where people's capabilities are maximized, through the application of mechatronics technology to medical/welfare segment.

We will realize sustainable growth through initiatives aimed at achieving Vision 2025.

## Realizing Sustainable Growth

# Our History and Core Competence

## 1915~ Startup period

- Focusing business on electric motors and their applications
- Focusing on motors as hardware and intelligence as software to control motors

## 1950~ Motor manufacturer

- Aiming for mechanical automation by leveraging advancements in control technology
- Aiming to realize "unmanned factory", automated with support of machines

## Contributing to the development of industry and society with world's first epoch-making products and technologies

Since its establishment in 1915, Yaskawa Electric has defined its area of business as electric motors and their applications, and continued to make challenges in the state of the art technology of the times. We apply "Motion control", "Robotics", and "Power conversion" that are core technologies as well as our strengths, which have been nurtured more than a hundred years, and contribute in resolving global issues such as declining birth rate and aging population and issues concerning energy and the environment.

1915  
Founding



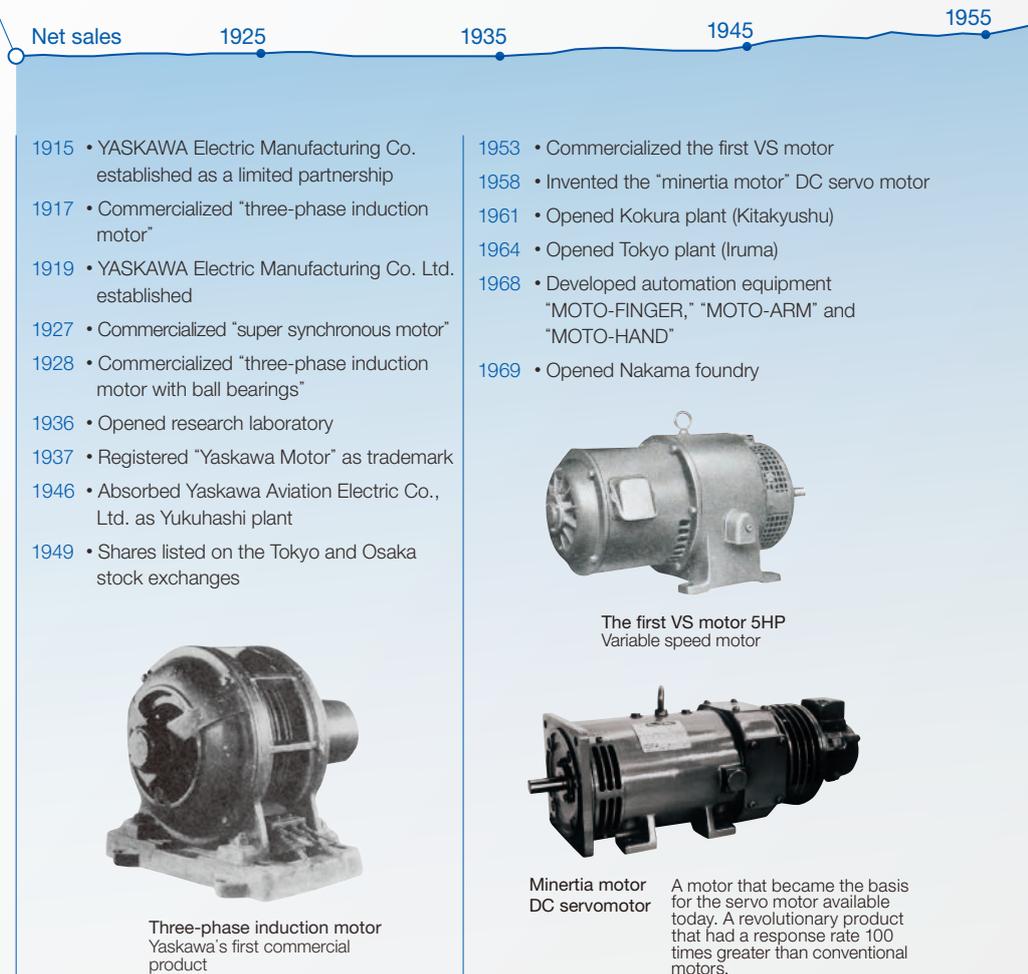
Promoter Keiichiro Yasukawa

Keiichiro Yasukawa, the promoter of Yaskawa absorbed new knowledge and philosophies from the West. He engaged himself in mining, later expanding his business to spinning, steel, railway and banking. He personally funded the opening of Meiji College of Technology, a vocational school for training engineers. The school later became Kyushu Institute of Technology, and continues to produce numerous engineers to this day.



Founder Daigoro Yasukawa

In 1915, Daigoro Yasukawa founded the Company's predecessor, Yaskawa Electric Manufacturing Co. The company started its business by manufacturing electric mining products, most of which were imported at that time. The domestic electric products were both scarce and technologically several steps behind the imported products, therefore this was a move that went ahead of the time.



Three-phase induction motor  
Yaskawa's first commercial product



The first VS motor 5HP  
Variable speed motor



Minertia motor  
DC servomotor  
A motor that became the basis for the servo motor available today. A revolutionary product that had a response rate 100 times greater than conventional motors.

1970~

## Automation provider

- Proposed the concept of "Mechatronics"
- Aggressively devoted management resources into the rapidly growing mechatronics market; unveiling new products back-to-back
- Changed the company name from YASKAWA Electric Manufacturing Co., Ltd. to YASKAWA Electric Corporation on the occasion of 75th anniversary

1990~

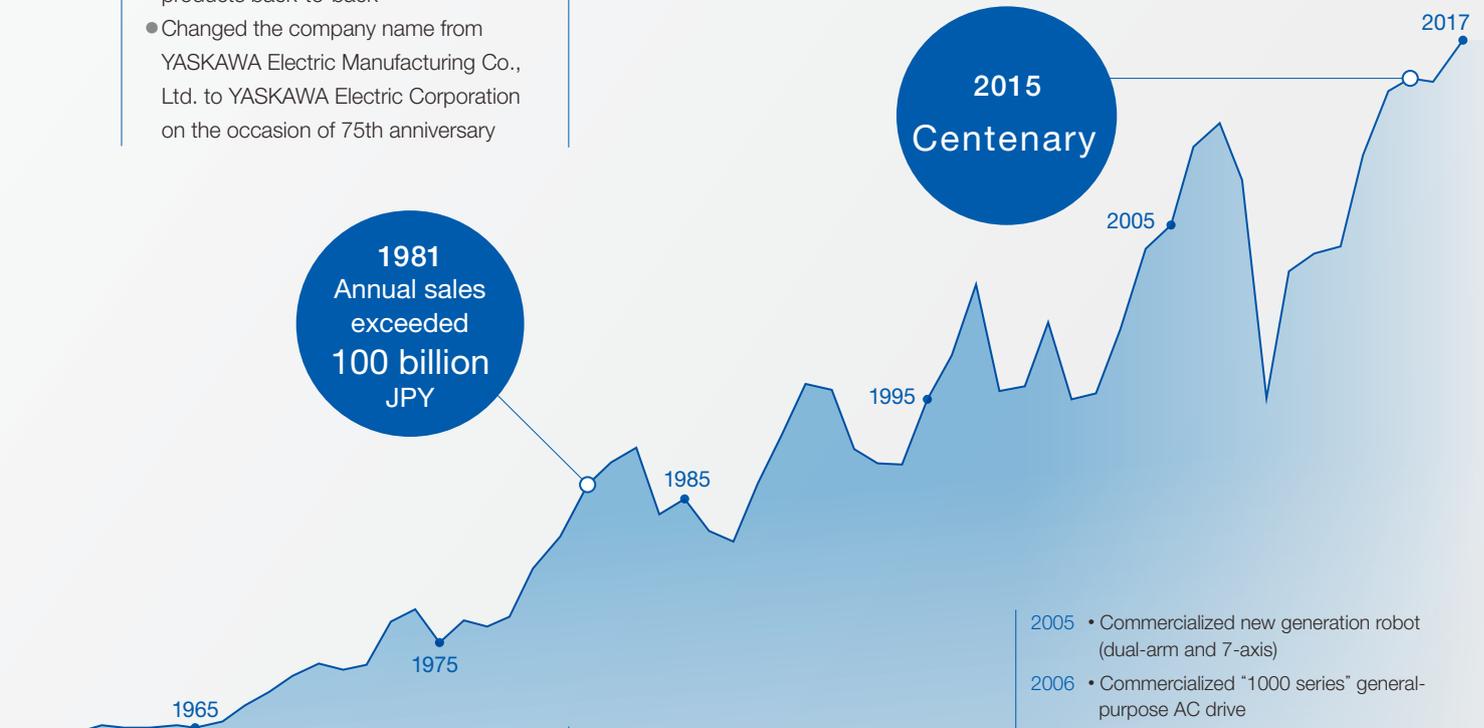
## Mechatronics promoter

- Offering solutions that match changes in society and industry
- Creation of new business by developing applications of mechatronics technology

2005~

## Total solution provider

- Launch of i<sup>3</sup>-Mechatronics, a new solution concept



- 1971 • Commercialized the "Varispeed (VS) series" AC drives
- 1974 • Started domestic production of floppy disk drives (as Y-E Data)
  - Developed of the "YASNAC" NC with built-in microcomputer
- 1977 • Commercialized "MOTOMAN-L10" vertically articulated industrial robot
- 1979 • Commercialized "VS-626TV" vector control AC drive
- 1983 • Commercialized the AC servo drive series
- 1987 • Commercialized vacuum robot for semiconductor manufacturing

- 1991 • Commercialized "Σ series" AC servo drives
- 1995 • Commercialized "VS-616G5" vector control AC drive
- 1998 • Commercialized "MOTOMAN-UP6"
- 1999 • Commercialized "MOTOMAN-CS series" clean robots for transferring liquid crystal substrates
- 2002 • Commercialized "TEM LX2" lower limb rehabilitation robot
- 2003 • Developed "SmartPal" next-generation robot

- 2005 • Commercialized new generation robot (dual-arm and 7-axis)
- 2006 • Commercialized "1000 series" general-purpose AC drive
- 2009 • Developed "QMET DRIVE" motor drive system for hybrid electric vehicles
- 2010 • Released "Enewin" electrical products for large-scale wind turbines
  - Commercialized "PV 1000" PV inverter
- 2013 • Commercialized "MOTOMAN-BMDA3" for biomedical applications
- 2017 • Commercialized servo motor with built-in amplifier
  - Commercialized "MOTOMAN-HC10" collaborative robot
  - Commercialized "MotoMINI" small and lightweight robot



**VS-616T**  
World's first transistor AC drive



**MOTOMAN-L10**  
Japan's first all-electric articulated robot



**Σ-I**  
World's smallest and lightest  
Frequency response 250Hz



**VS-616G5**  
World's first general-purpose vector control AC drive



**MOTOMAN-UP6**  
World's first multiple robot cooperative control



**MOTOMAN-DA20**  
World's first dual-arm industrial robot for volume production



**MotoMINI**  
The smallest and lightest in industry



**Varispeed AC**  
World's first matrix converter

World's first GaN power semiconductor-equipped servo motor with built-in amplifier



Vision

Financial Capital

Manufactured Capital

Intellectual Capital

Human Capital

Social and Relationship Capital

Natural Capital

Corporate Governance

Financial and Corporate Information

By offering new automation solutions for our customers to win, we will both lead the revolutionary industrial automation and pursue sustainable growth focusing on revenue.

The numerical targets in Dash 25 (FY2016-2018), the company's mid-term business plan, were achieved within FY2017, a year ahead of schedule. Tell us about progress on the basic policies in Dash 25.

We formulated Dash 25, our current mid-term business plan, in FY2015, and at the time, we couldn't be optimistic about our outlook due to a slowdown in Chinese market, the United Kingdom's departure from the EU, and rapid changes in the currency and stock market. But we were later able to get started with favorable tailwinds—the apparent labor shortage in China and an acceleration of automation in manufacturing due to soaring labor costs. One of the results for our company is that we were able to capture those opportunities while fully leveraging the “glocal” development and manufacturing structure that we had been building in our previous mid-term business plan, Realize 100, and tied it in to earn-

ings. And on the other hand, when we look at progress in our basic policy identified in Dash 25, there are some aspects where we cannot say that we have fully honed the ability. Particularly in clean power, which we have been attempting to make a core business, there are delays in our progress for profitability.

Rather than reacting nervously to achievements in our mid-term business plan, we see the target that we should be aiming for as always “achieving increases in sales and profit” and “winning against our competitors”. The targets in our long-term business plan, Vision 2025, are approximately 800 billion yen in sales and more than 100 billion in operating profit, with the achievement of our targeted operating profit standing as a priority target. I would like to create a structure where, for example, we are able to achieve that targeted operating profit with 500 billion yen in sales.



Representative Director  
President

*R. Ogasawara*



**As we can see from IoT and AI, the speed of technical advancements is becoming faster and faster. How will that impact your business? How will you respond?**

As seen by the fact that many of the higher-ranked enterprises in terms of market capitalization comprise software and communications, it's advancements in communication technology that's leading technical advancements today, and we can surmise that it's these advancements that are tying in to improved performance in semiconductors and CPUs.

It's said that the migration to 5G for communication standards will change the world. In the FA industry which we are a part of, the use of IoT and AI will be accelerated to realize Industrie 4.0., which will have important impact on our business areas inevitably.

In the same way that PCs are connected through the Internet, devices for moving motors such as amplifiers, controllers and AC drives will also be connected by networks at the manufacturing scene in the near future. Our company will leverage the data that is obtained from these connected devices and look at creating solutions together with our customers to lead revolutionary industrial automation.

**You announced the new solution concept "i<sup>3</sup>-Mechatronics" (i cube Mechatronics) in October 2017. How will this contribute to your performance in the time to come?**

The concept behind i<sup>3</sup>-Mechatronics is the way that we consider business and our action guideline, and it isn't as if we are actually selling i<sup>3</sup>-Mechatronics in itself. The "i<sup>3</sup>" stands for three words—"integrated," "intelligent," and "innovative." It represents our belief that by collecting data from the devices that comprises manufacturing lines based on the concept of "integrated", the machines and facilities that embed them become "intelligent" and enables "innovative" manufacturing lines to be a reality, which is our guideline for action.

What I always tell our employees is that a solution "is not simply selling our products and services in a package but that the customer wins in business by using the solutions that we supply."

Yaskawa Electric's strength had been the very devices—our servos, AC drives, and robots—backed by our world number one technology that has been nurtured in the field of "motors and their control." By controlling these devices comprehensively, we will make our customers' manufacturing lines more intelligent, and we will push forward our activities so that their profits will increase as a result.

And by adding features like failure prediction that leverages AI, a tool for making things intelligent, to spice up our solutions, we will continue to boost value of our mainstay products—our servos, AC drives, and robots.

**As a "company founded on technology", Yaskawa has engaged in R&D to produce products sticking to being world number one or world's firsts. What are the challenges you face in continuing your efforts to achieve technology that's world number one or world's firsts?**

The answer to that challenge would be "the establishment of the Yaskawa Technology Center (tentative)" announced in April. We are presently conducting operations with a focus on AC drives for the technology to control motor rotation, servos, technology to control position, and industrial robots, which apply the technology to con-

trol position, as a developed form of our core technology, “motors and their control”. However, it is my belief that to go back to “motors and their control”, which is our origin, and to create new ideas in a cross-sectoral manner, we need to change our product-out thinking that we aim to be world number one within the frameworks of our current servos, AC drives, and robots. Through the Yaskawa Technology Center, I would like to change the ideas of our engineers and further accelerate our pursuit to achieve world number one and world’s first technologies.

**Since appointed as president, you have been appealing the importance of management through the use of data (digital management). And this year, you have also assumed the position as a head of the ICT Strategy Promotion Division. What specifically are you aiming for with this?**

Based on the concept of aiming for more intelligent business operations by the integrated collection and use of data through the internal deployment of i<sup>3</sup>-Mechatronics, we will also get data connected to development, manufacturing, and sales comprehensively. We will also initiate innovation for systems related to accounting and HR, and be comprehensive in automating and boosting the efficiency of our business administration to manage and evaluate our business status and human resources digitally.

**This year, you are calling on employees to make Yaskawa a company that is worth working for. How specifically will you do for that?**

We are currently conducting reviews on our HR system and remuneration system to create a company that’s worth working for. For example, we will make it possible to work in various ways to match individual lifestyles, such as workstyles where there are no transfers or workstyles where the job types are limited, and we will adopt frameworks for leveraging and developing our human resources. If we can have each and every one of our employees consider how their work ties in to profit for the company, taking action to evaluate the output of that numerically, it will be possible for them to achieve remuneration that compensates output from their free work-

style. I’m convinced that there will be true diversity in the workplace.

While it isn’t easy to create such a system, we will continue to push forward our initiatives as a key for the continued sustainable growth of our company.

**Lastly, please offer a message to our stakeholders.**

Amid the top companies that produce industrial robots—FANUC, ABB, KUKA, and Yaskawa, only two of them build robots using their own motor products and technology, between whom only Yaskawa sells its motors globally. By leveraging this unique strength, we will focus on realizing revolutionary industrial automation and further expansions in our business based on the concept of i<sup>3</sup>-Mechatronics. For that purpose, we will stick to profit for the next decade by leveraging servos, AC drives, and robots, our core products, to a full extent, and we will make efforts to maximize our earnings.

We will also maintain a long-term perspective and aim for management that is strong in both offense and defense, and realize sustainable growth by enhancing the effectiveness of our governance by enhancing our outside directors. We will make efforts together with our stakeholders to co-create value and continue to improve our return of profits, for example by improving our dividend payout ratio, taking agile steps such as stock repurchases in accordance with our profit growth, vitalizing the local community through our business, and offering returns to our employees.

I would like to take this opportunity to ask our stakeholders for the continued support and patronage to Yaskawa in the days to come.



## Special Feature:

# Achieving Revolutionary Industrial Automation with the “i<sup>3</sup>-Mechatronics” Solution Concept

We will reform our business model to expand our business domains and find new opportunities to sell products, which represent the core of our business operations.



Director, Managing Executive Officer  
General Manager, Corporate Sales & Marketing Div.

**Koichi Takamiya**

In October 2017, we announced a new solution concept called “i<sup>3</sup>-Mechatronics.” In order to materialize the concept, we reorganized our sales structure in Japan, which used to be divided into business segments, to create a structure divided into markets and clients in FY2018. That marked the actual beginning of our new business efforts. The company’s sales structure was reorganized for the first time in 18 years. What are the goals of these efforts?

**Takamiya** Ever since we made a shift in our business operations to focus on mechatronics in the 1980s, we have managed to expand globally by selling AC servos, AC drives, robots, and other products (components). In recent years, however, markets have been undergoing changes in order to deal with labor shortages and promote the next generation of manufacturing with IoT and AI technologies. This has resulted in a rapid increase of new demands regarding production efficiency and quality maintenance. Under such circumstances, it is becoming increasingly difficult to boost growth by focusing on conventional methods for selling products (component sales), especially in the Japanese market. In order to tackle these changes, we decided to reform our sales structure this fiscal year and move towards a sales method for providing integrated solutions with Yaskawa products and digital data management. We reorganized our existing sales structure, which used to be divided into product categories. The new structure is divided into regions and combines a variety of different products, following the principle “one customer, one face.” The solutions we sell entail proposals to solve our customers’ management issues and improve their productivity or achieve other management objectives. Through these efforts, we aim to materialize the concept of i<sup>3</sup>-Mechatronics.

## How does the sales method that combines products and digital data management work?

**Takamiya** In the past, we used to sell our products by first seeking to understand the needs of the design and production engineering department of a particular customer that actually used our products. Then we provided the customer with proposals to help them achieve various objectives, such as improving the performance of their machinery or reducing takt time on their production line. With the new sales method, on the other hand, we first seek to strengthen our relationship with the management of a particular company through consultations, and then we choose an approach in order to help the customer solve management issues and achieve various objectives. This in turn provides us with new opportunities to sell our products, which represent the core of our business operations. Thus, we encourage sales activities by the top management to get a better understanding of our customers' management issues and objectives. We are also enhancing efforts that cut across the business segments of our company to deliver optimum solutions.

## What proposals do you provide as integrated solutions?

**Takamiya** To determine what digital solutions need to be added to our products (components) that a particular customer is using, we seek to understand the management issues and IoT or AI capabilities of the customer to provide them with a proposal tailored to their needs. With the con-

cept of i<sup>3</sup>-Mechatronics, which serves to inspire innovation by utilizing the data we obtain from components to make the machines more intelligent, we are improving our capability of providing our customers with proposals that lead to direct solutions to their management issues. Our current efforts represent the first attempt by our company to provide integrated solutions. This change is essential for the expansion of our business domains. By deepening on-site knowledge and experience and by continuing to succeed in our endeavors, we can reform our business model, which symbolizes the spirit of Yaskawa.

**In order to achieve the next generation of manufacturing with IoT and AI technologies, our competitors also continue introducing various new concepts and participate in collaborations that go beyond their corporate frameworks. Taking this into consideration, what do you think are the strengths and distinguishing qualities of Yaskawa?**

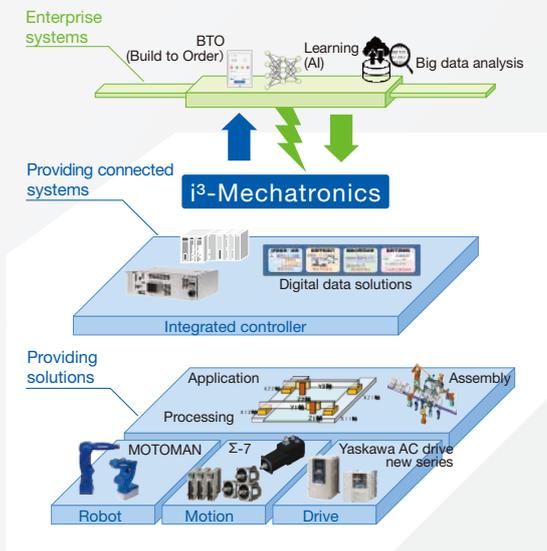
**Takamiya** Our key products include AC servos, AC drives, and robots. These devices play an essential role in moving the machinery and products at production sites. They also generate data related to facility operation on a daily basis. These products boast the best performance in their category in the entire world, and they maintain the top-class global market shares for many years. Also, the data that can be obtained from these robust components is far more detailed compared to the products of our competitors. Under the

## Overview of i<sup>3</sup>-Mechatronics

"i<sup>3</sup>-Mechatronics" is a solution concept that serves as the basis for our company's plan to realize revolutionary industrial automation, which is stated in Vision 2025.

- Integrated [Systematization]
- Intelligent [Improving intelligence]
- Innovative [Evolution through technological innovation]

Our solutions combine software and hardware with these attributes.

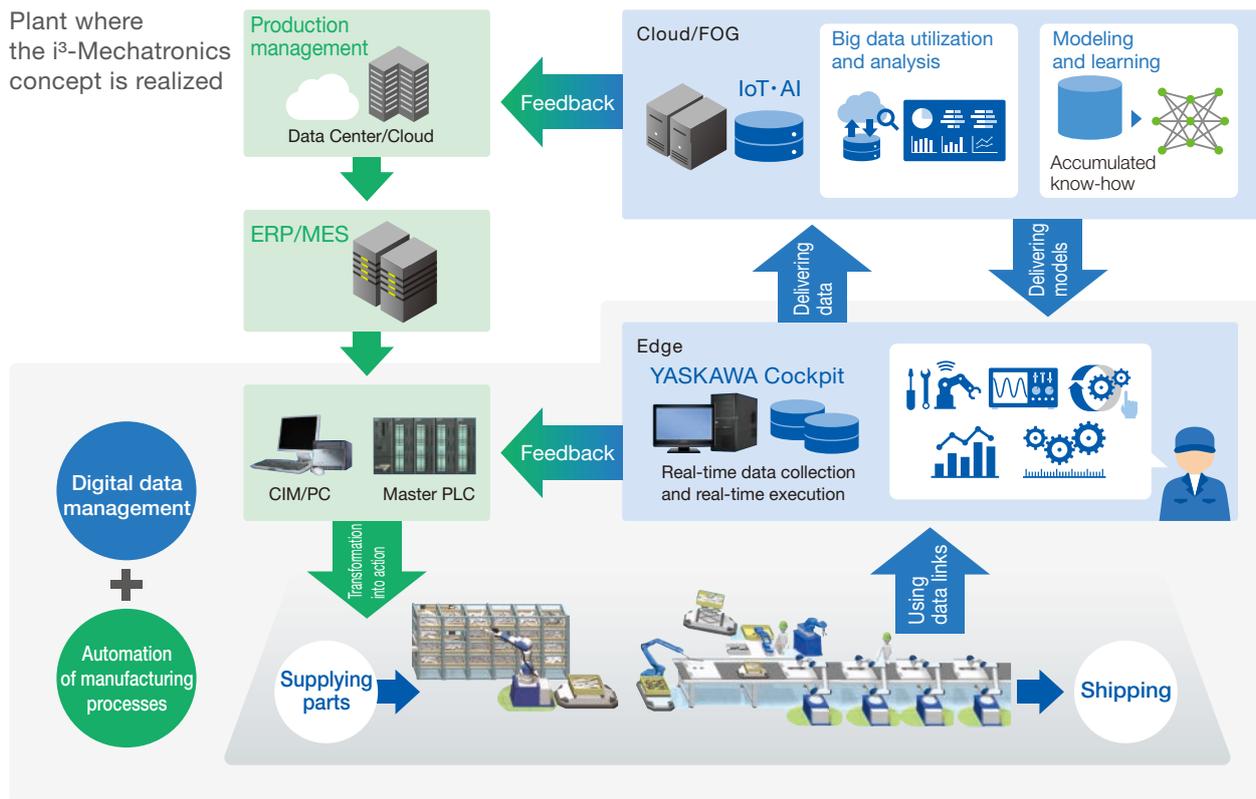


## Achieving maximum efficiency, quality, and production continuity

Digital data solutions provided through aggregation of knowledge related to mechatronics (ICT/MES/IoT/AI)



## i<sup>3</sup>-Mechatronics Materialization Model



concept of i<sup>3</sup>-Mechatronics, which seeks to inspire innovation by making our machines more intelligent, we can utilize high-quality data obtained from our products. This represents our greatest strength.

While the concepts for the next-generation manufacturing proposed by other companies tend to advocate a customer retention approach starting from the customer's host system, we specialize in utilizing production site devices located in the bottom end of the process and detailed data generated by those devices. Our company focuses mainly on looking for solutions to our customers' management issues from the edge area\*1.

External collaborations that include host system vendors are essential for this unique model we have developed. Therefore, we are determined to maintain an open attitude towards such collaborations. Our products can be connected regardless of any host systems. The YASKAWA Cockpit software\*2 installed in edge computers allows our customers or host system vendors to obtain any collected data. By relying on a strategy that combines robust components and network compatibility, we want to participate in collaborations that will allow us to build win-win relationships with all of the companies related to our business. Our ultimate goal is to provide solutions for our customers' management issues.

These efforts aim to strengthen our customers' sites (edge areas) and allow them to succeed in their business endeav-

ors, which will eventually help us boost our own growth.

\*1: Edge: An information processing location for data analysis and feedback processes that need to be carried out in real time (an area near a production site such as a factory or production plant)

\*2: YASKAWA Cockpit: Our software for integrated management and real-time monitoring of production line operation status, device status, production status, and other data

### What reforms does Yaskawa need to make to implement the i<sup>3</sup>-Mechatronics concept and boost growth in the future?

**Takamiya** Having a good understanding of our customers' management issues and accurately defining the services our customers need are going to become even more important for our future sales operations if we are to materialize the i<sup>3</sup>-Mechatronics concept. It is essential to use this process in order to strengthen our relationships with our customers and to expand our business to areas we could not access with our conventional sales method for selling products (component sales). As business practices are undergoing drastic transformations, we are planning to win against our competitors by materializing the concept of i<sup>3</sup>-Mechatronics with the unified efforts of our production, sales, and engineering divisions. The goal is to attain our Vision 2025 objectives and start on a new path to growth beyond that.

# Financial Capital

ROE  
**18.3%**



Net sales  
**448.5**  
billion JPY

Operating  
income ratio  
**12.1%**

## CFO Interview

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We will realize sustainable growth by maintaining and improving our high levels of ROE through an appropriate capital policy and by boosting social contribution through our business initiatives.

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Representative Director, Senior Managing Executive Officer

**Shuji Murakami**

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**What does the Yaskawa Group consider to be the most important management indicator in realizing the long-term business plan, Vision 2025?**

**Murakami:** We are pushing forward initiatives for realizing numerical targets set forth in our Vision 2025 (FY2016-2025), in three steps (our mid-term business plan). In our current mid-term business plan "Dash 25" (FY2016-2018), which is the first step for that, we have been conducting business under the policy of "establishing a high-profit corporate structure," and have been partial to operating profit ratios, and conducted operations to improve profitability. We have been able to achieve our targeted operating income a year ahead of schedule by effectively pushing forward the measures that we had prepared in the previous mid-term business plan against a backdrop of a favorable market environment. The indicator that we view with the greatest importance in our business is growth in our operating profit in the mid- to long-term, and we would like to promptly achieve our targeted 100 billion yen in operating profit as set forth in our Vision 2025 by improving this in a continuous manner.

**The Group's Principle of Management is "to leverage the pursuit of its business to contribute to the advancement of society and the well-being of humankind". Furthermore, as one of core tenets to realize this, it also advocates "to boost management and operation efficiency and achieve the returns necessary for the vitality and growth of the company".**

**Murakami:** For our company to realize our business philosophy, it is necessary for us to contribute to society in a unique manner and to continue to exist. By obtaining revenue in accordance with that contribution, by reinvesting that, we will be able to make even greater contributions. We make it a major policy at our company to distribute the revenue that we have earned in three directions, to "invest in the future of the company (so we may make even greater contributions)," "offer ap-

propriate returns to our shareholders" who support that, and "offer appropriate distributions to our employees" who support our corporate activities. Even if we produce high levels of profit, there is no meaning for our company to continue to exist under this corporate philosophy if we only pursue revenue for certain individuals and do not contribute to society.

As to our customers and our partners, the most important thing is to maintain good relationships that will improve mutual value through business, not through lowering prices, and that is the essential condition for continuing our business eternally. I believe that is what "the returns necessary for the vitality and growth of the company" refers to.

**The Company bought back the own shares for the first time this fiscal year. Tell us about the background for this in correlation to your policy to distribute revenue in three directions.**

**Murakami:** We achieved the objectives identified in Dash 25 a year ahead of schedule in FY2017, and the improvement in our profit ratio exceeded our initial expectations. This achievement led us to consider additional measures in the three directions I mentioned earlier; "investment in the future of the company," "returns to our shareholders," and "distributions to our employees" since it had created greater cash flow than what we expected. To be specific, we planned 10 billion yen to set up "Yaskawa Technology Center (tentative)" that we had announced in April as an investment for the future of the company, in addition to a total of two million shares as returns to our shareholders, worth more than nine billion yen of stock repurchases. As distributions to our employees, to increase the link with the Company profit, we included an additional bonus in FY2018 budget at around three billion yen.

**Will the distribution of surplus cash continue?**

**Murakami:** In Vision 2025, we are anticipating dividend payout ratio at 30% plus extras (30% by 2020) and capital investment (including M&As) at slightly over 6% of sales, however, our financial structure at present has become even stronger and we are in a virtually debt-free state in net cash\*1. As profit ratios continue to further improve, there are possibilities of surplus cash being generated, even if we implement the dividends and the capital investment that I explained earlier. We will continue



to build an optimum capital structure to realize high levels of ROE by taking more aggressive initiatives in our growth investing corresponding to the performance of our company, improving total return ratios\*<sup>2</sup> through such measures as repurchases of our own shares, as well as considering and implementing appropriate profit distributions with an awareness of attractive returns for employees to secure the best human resources.

\* 1: A status where the values for cash and cash equivalents (savings, securities held over short terms) excluding interest-bearing debts (loans, company bonds) are in the black on a balance sheet.

\* 2: Ratio of the sum of dividends and stock repurchases divided by net profit.

#### Please tell us about your thoughts on “investing in the future of the company”.

**Murakami:** We are planning capital investment in FY2018 at around 30 billion yen. That’s more than double our budget for depreciation and amortization. If we invest within the size of depreciation we will maintain the status quo toward the future of our company, but the reason why we’re investing at much greater amounts is that the areas of mechatronics, where we have our pivotal footing, as well as clean energy, which is a new market, is expected to continue to expand, and we expect that there is a lot of room for growth to further increase our revenue in the future. We intend to create returns that respond to the expectations of our shareholders by continuing to make aggressive investments in the time to come.

#### Please tell us about your thoughts on capital efficiency.

**Murakami:** In Vision 2025, our company sets its ROE target at above 13%. On the other hand, as to our weighted average cost of capital, we see this at around 9% and are always anticipating shareholders’ equity costs at 10% while aiming to create greater profit. As a result of improved profit ratios in

recent years, our ROE exceeded the target in Vision 2025, and stood at 18.3% in FY 2017, with significant growth.

On the other hand, there is also a need to consider returns on shareholder capital based on market prices and the current PBR is around five times, with extremely high expectations for growth woven into our stock prices. I think that we do need to speed up the deployment of our measures for the Vision 2025 and maintain and improve the rate of our earnings growth in a continuous manner.

As for the capital management, we are always aiming for efficient management to minimize costs related to foreign exchange and funding by optimizing the capital structure and the fund movements among Group companies as well as promoting local production in the regions where demand is increasing and controlling inventory levels in an appropriate manner.

We will also steadily move forward with the development of appropriate allocations of management resources and our business portfolio for a stable earnings model that does not rely excessively on capital investment in specific industries.

#### Lastly, please offer a message to your stakeholders.

**Murakami:** Through our business, our company contributes in resolving social issues such as the shortage of manpower due to a declining birthrate and an aging population and issues of a global scale such as global warming. We also move forward a wide range of initiatives aimed at improving people’s quality of life by offering value through leveraging our technologies. While there are new businesses that have yet to reach profitability, we will continue to realize profitable growth through continuous selection and concentration and aim to become a company that is able to achieve sustainable growth and can make more contributions to society and offer more returns to its stakeholders.

# At a Glance

The Yaskawa Group deploys the technology and knowhow of the highest global standards to its products and services through business activities in the three core business segments of Motion Control, Robotics and System Engineering.

	Business Overview	Products
<p><b>MOTION CONTROL</b></p> <ul style="list-style-type: none"> <li>○ AC servo &amp; controller business</li> <li>○ Drives business</li> </ul>	<p>AC servos are incorporated in production equipment for electronic parts, semiconductor products, etc., that require high precision. AC drives are used in social infrastructure, such as HVAC, escalators and elevators, and contribute to energy-saving.</p>	<p>AC servo <math>\Sigma</math>-7series and machine controller MP3300</p>  <p>Yaskawa AC drive new series</p> 
<p><b>ROBOTICS</b></p> <ul style="list-style-type: none"> <li>○ Arc and spot welding robots</li> <li>○ Painting robots</li> <li>○ Handling robots</li> <li>○ Clean/vacuum transfer robots for semiconductor and LCD-manufacturing equipment</li> </ul>	<p>The segment supplies vertical articulated robots as key products to contribute to the automation of welding, painting, assembly, transfer, etc., at production sites of automobile-related markets and various other fields.</p>	 <p>Arc-welding robot MOTOMAN-AR1730</p>  <p>Collaborative robot MOTOMAN-HC10DT</p>  <p>Robot controller YRC1000</p>
<p><b>SYSTEM ENGINEERING</b></p> <ul style="list-style-type: none"> <li>○ Steel plant business</li> <li>○ Social system business</li> <li>○ Environment &amp; Energy business</li> <li>○ Industrial electronics business</li> </ul>	<p>The segment mainly targets the market of various large-scale plant facilities, such as steel plants and water treatment plants, as well as large-scale cranes for which stable operation is essential. It also offers electric products for large-scale wind turbines, solar generation and marine application in environment &amp; energy business.</p>	 <p>Medium-voltage matrix converter</p>  <p>PV inverter</p>  <p>Generator and converter for large-scale wind turbines</p>
<p><b>OTHER</b></p> <ul style="list-style-type: none"> <li>○ Motor drive system for electric vehicles</li> <li>○ IT-related services</li> <li>○ Logistics</li> </ul>	<p>The segment covers information-related businesses and businesses such as logistics services, etc.</p>	 <p>Motor drive system for electric vehicles</p>

\* · Revisions were made to the division of businesses segments starting FY2017. The PV inverter business, which was previously included in Motion Control, is included in System Engineering. Value and profit ratios of each segment for FY2016 reflect this change. The change is not applied to values and profit ratios for the period up until FY2015.  
 · The Company changed its accounting period starting FY2017 from March 20 to the last day of February. As a transitional year for this change, FY2017 was from March 21, 2017 to February 28, 2018.

	Net Sales*	Operating Income (Loss)*	Percentage of FY2017 Net Sales																														
	<p>(100 Million yen)</p> <table border="1"> <tr><th>FY</th><td>2013</td><td>2014</td><td>2015</td><td>2016</td><td>2017</td></tr> <tr><th>Net Sales</th><td>1,623</td><td>1,881</td><td>1,875</td><td>1,720</td><td>2,120</td></tr> </table>	FY	2013	2014	2015	2016	2017	Net Sales	1,623	1,881	1,875	1,720	2,120	<p>(100 Million yen)</p> <table border="1"> <tr><th>FY</th><td>2013</td><td>2014</td><td>2015</td><td>2016</td><td>2017</td></tr> <tr><th>Operating Income</th><td>164</td><td>217</td><td>224</td><td>227</td><td>417</td></tr> <tr><th>Operating Income Ratio (%)</th><td>10.1</td><td>11.6</td><td>12.0</td><td>13.2</td><td>19.7</td></tr> </table>	FY	2013	2014	2015	2016	2017	Operating Income	164	217	224	227	417	Operating Income Ratio (%)	10.1	11.6	12.0	13.2	19.7	<p>47%</p>
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# Motion Control

## AC Servo & Controller Business

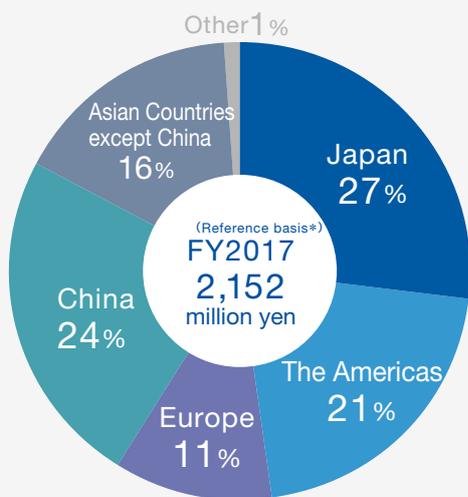
Enhancing machine performance as major components incorporated in production equipment



Executive Officer  
General Manager, Motion Control Div.

**Akira Kumagae**

## Sales Breakdown by Region



\* • Reference-basis figure based on an assumption that the accounting period remained unchanged (from March 21, 2017 to March 20, 2018)  
• Total figure for the Motion Control segment, which is comprised of AC Servo & Controller business and Drives business

## Strengths of Our Business and Differentiation

- In 1958, Yaskawa was the first in the world to develop the Minertia Motor, which became the original form of servo motors today. The company continues to maintain the best performance and product quality in the world as well as top global market share.
- With business deployments founded on sturdy roots in each of its global regions, Yaskawa maintains solid relationships of trust with top machinery manufacturers. Together with its customers, Yaskawa always pursues state of the art technologies as it contributes to the development of leading-edge industries of each era through the advancements and the high standards of performance of its equipment.
- Yaskawa conducts in-house development and manufacturing of encoders, motors, amplifiers, and controllers which are necessary for servo drives.
- The company optimizes the procurement of parts and production within demand areas for highly competitive Q (quality), C (cost), and D (delivery).

## Analysis of Business Environment

### Opportunity

- Although some fluctuation may be seen based on capital investment cycles in smartphone-related demand, which had been a key factor in pushing performance in FY2017, the demand is expected to remain strong. In addition to steady capital investment for semiconductors demand, the demand is diversifying to automated manufacturing facilities for items such as household appliances and communication devices, as well as manufacturing equipment for lithium ion batteries and LEDs, the company anticipates continued market growth in the time to come.
- Through significant increases in the volume of data communication due to shifts in communication standards from 4G to 5G, moves for various things to be linked online with IoT will further accelerate. Accordingly, because there will be a progress in digitalization and boosted performance of devices, and increased performance, smaller sizes, and diversification of components to be embedded within these devices, increases in capital investment for manufacturing these devices will tie in to major opportunities for growth for Yaskawa.
- The desire for more convenience and more intelligence in the process of manufacturing is becoming stronger than ever before. One such example is improved productivity through the use of AI. To make this possible, the analysis of data pertaining to the operation status of AC servos which are built into manufacturing equipment will be indispensable. As Yaskawa products offer not only the best quality and performance in the world but also enable a diverse array of data

to be obtained, such as data on the status of operations, we believe that the areas for the company to flourish will become even greater in the next generation of manufacturing.

### Business Risks and Countermeasures

- While demand continues to rapidly increase on one hand, risks are also present on the other hand of a shortage of parts. Yaskawa makes efforts to maintain and improve its relationship of trust with its partners and is committed in spreading out its procurement sources through local procurement while ensuring the stable attainment of parts.
- As for the area of AC servo drives, while emerging manufacturers are beginning to appear on the scene, mainly in the Chinese market, Yaskawa continues to maintain number one global market share by maintaining an edge in product quality and in the technical aspect and by maintaining cost competitiveness through local production. In addition to these strengths, it maximizes its character as a robotics manufacturer that offers not only servo drives as single units but also proposals which include expertise on robots to further differentiate itself in the market.
- Initiatives are on the rise for collaborations that go beyond the frameworks of individual companies in aiming for the next generation of manufacturing. In response to these moves, Yaskawa will maintain an open position that is not partial to host systems in order to push forward collaborations with all types of companies for building win-win relationships.
- The emergence of an actuator that offers performance which can surpass the performance of motors and has the potential to replace motors is a risk for our company. While no such technologies have been confirmed to date, we will continue to pay close attention in our monitoring activities.

## Results and Challenges for Mid-Term Business Plan Dash 25 (FY2016-FY2018)

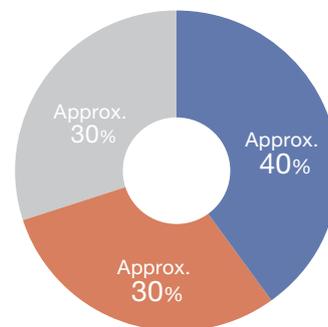
### Results

- Major improvements have been posted in our income ratios due to increased switchover ratio to our flagship  $\Sigma$ -7 Series model and accelerated production in demand areas in China.
- Major increases have been achieved for Yaskawa's market share in the Chinese market on the back of its highly competitive products (the  $\Sigma$ -7 Series) and strong capacity for local performance from the perspectives of development and sales.

### Challenges

- There is a need to speed up the process between development and mass production that matches the global increase in demand and the speed of changes within markets and to simultaneously make further improvements in work efficiency.
- Planned launches for initiatives such as the leveraging of IoT and AI are necessary in order to lead the revolutionary industrial automation. We will first need to verify the latest manufacturing technologies at Yaskawa Solution Factory (tentative name), our new plant in our Iruma site, which will begin operations in the first half of FY2018, and to tie the verified technologies in to products and to proposals for our customers in a concrete manner.

### Sales Breakdown by Application (FY2017 Results)



- Electronics-related industries including semiconductor, FPD and electronic components
- Machinery-related industries including machine tool, metal processing, press machine and robots
- Other (Packaging, textile, injection molding, etc.)

### TOPICS: Resolving Social Issues through Business

Needs for protecting the global environment and for improved working environments in the manufacturing scene have led to further focus on saving energy, cleaning up the environment, and reductions in pollutants.

Needs are rising for switches from conventional hydraulic operations to motor drives as clean sources of energy which can cope with needs for high performance in the area of large machinery as well, for example press machines and injection molding machines used as manufacturing equipment for automobiles.

In order to respond to such needs, Yaskawa will commercialize ultra-high-capacity servo drives which are energy-efficient and offer high rates of performance.



An ultra-high-capacity servo motor

# Motion Control

## Drives Business

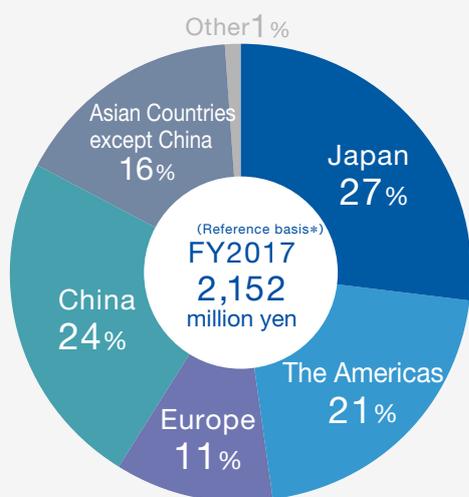
Contributing to sustainable development of society and industry by realizing energy-saving and higher performance of machinery through optimum motor control



Executive Officer  
General Manager, Drives Div.

**Nobuaki Jinnouchi**

## Sales Breakdown by Region



\* • Reference-basis figure based on an assumption that the accounting period remained unchanged (from March 21, 2017 to March 20, 2018)  
• Total figure for the Motion Control segment, which is comprised of AC Servo & Controller business and Drives business

## Strengths of Our Business and Differentiation

- Ever since we released the first transistor AC drive in the world in 1974, we have always sought to commercialize the world's first technologies ahead of our competitors. Our efforts have contributed to optimizing motor control and improving energy efficiency.
- As a group of AC drive specialists, we utilize the application know-how we have gathered over the years to provide solutions for our customers' production sites. This enables maximum machine performance, which led us to obtain top market shares in each global region.
- We offer a wide selection of products from general-purpose models to dedicated models for specific applications in order to meet a broad spectrum of our customers' needs.
- We have expanded our production to five plants around the world. By reducing the amount of work hours, encouraging automation, and increasing the local procurement rate for parts, we have managed to keep our products highly competitive in terms of their performance and prices.

## Analysis of Business Environment

### Opportunity

- AC drives are utilized for a wide variety of purposes. These may include infrastructure investments such as cranes, elevators, fans, pumps, and air-conditioning systems for buildings, or equipment investments such as textile machinery, metal processing machinery, packaging machinery, and conveyors. We expect a stable market expansion linked to economic growth in various regions.
- The recoveries in the oil & gas-related demand in the US and infrastructure investment in China led to good sales results in FY2017. These markets are expected to maintain a high level of growth in FY2018 as well. In addition, the 2020 Tokyo Olympics in Japan are expected to spur the demand for air-conditioning equipment at hotels and commercial facilities.
- The demand for environmentally friendly electrical devices is increasing, and countries around the globe have been implementing energy conservation regulations such as the Top Runner Program\* for motors. As a result, the use of AC drives is increasing rapidly on a global scale as a measure to adapt to these circumstances. However, even in Japan, where the ratio of industrial motors with AC drives is said to be relatively high, the numbers remain around 25%, which gives us a lot of room for growth in the future.

\* This is a system that defines the reference target values and target fiscal year for the energy consumption efficiency of specific devices in order to promote efforts to increase energy consumption efficiency with a focus on devices.

### Business Risks and Countermeasures

- In some markets, especially those in emerging economies, an increasing number of customers are looking for cheaper AC drives. To respond to such demands, we seek to find the right

balance between functionality, performance, and cost according to the needs of our customers in various regions. We provide products with an ideal cost-performance ratio for each region. In addition, we strive to reduce costs even further by optimizing our supply chain and other measures. At the same time, we seek to enhance our cost reduction proposals for the entire systems, which include peripheral devices.

- Emerging players such as the Chinese manufacturers require special attention. Their price competitiveness based on government subsidies and product quality improvement represent future risks for us. Therefore, we need to use the application know-how we have gathered over the years with the goal of improving our ability to provide solution proposals for production site issues of our customers. In this way, we aim at differentiate ourselves technologically.
- Relying on external suppliers of essential AC drive parts rather than insourcing those parts represents a risk for our company. We encourage measures to ensure such parts can be supplied in a stable manner.
- Some of our customers are starting to insource AC drives instead of purchasing them, which has been made possible by more sophisticated semiconductor devices. We focus on areas that require high technological capabilities and are characterized by relatively high costs of insourcing. Our goal is to appeal to our customers by emphasizing the potential to reduce costs by utilizing our products.

## Results and Challenges for Mid-Term Business Plan Dash 25 (FY2016-FY2018)

### Results

- We managed to capture the business opportunities resulting from the recovery of our core markets, including oil&gas industry in the US and infrastructure market in China. This allowed us to significantly improve our performance in FY2017.
- Our sales style is based on offering technological proposals to solve our customers' issues by using door openers, including the GA700, which is the leading product in the new Yaskawa AC drive series, and the U1000 matrix converter, which really sets us apart from our competitors. We use this strat-

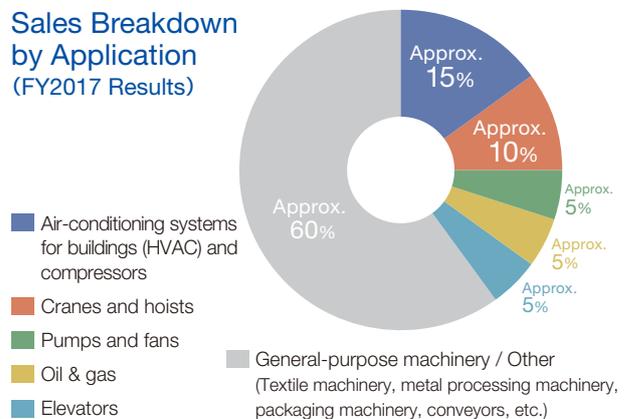
egy to expand to new markets with a focus on machinery manufacturers. In order to link as many inquiries as possible to orders, we seek to offer our customers new value, which includes functions to monitor the operating status of the AC drive itself, functions to predict machinery or equipment failures, and functions to detect equipment malfunctions.

- In the Chinese market, where price competition is particularly intense, we have focused our efforts on promoting products for specific applications according to our customers' needs. We have sought to improve our price competitiveness to gain some competitive advantage over our rivals.

### Challenges

- We need to speed up our product development processes. We are reanalyzing the technological resources needed to solve any production site issues our customers are faced with and the resources we need to develop new products. We are also going to properly allocate those resources.
- One of the advantages of our AC drives lies in their capability of being connected to a large variety of industrial motors. However, we are still not able to combine our AC drives with a specific type of motor to create a product that truly stands out. In order to tackle this issue, we are going to maximize the synergistic effects inside the Yaskawa Group in order to increase the added value of motors and AC drives used in sets.

### Sales Breakdown by Application (FY2017 Results)



### TOPICS: Resolving Social Issues through Business

In recent years, the issue of workforce shortages in industrialized economies has exacerbated the need for sophisticated production systems and automation. As a result, the failure prediction function is now considered to be an essential new role of every AC drive. This function allows the AC drive to detect any abnormalities in the machinery or equipment on a production line and trigger an alarm before a malfunction occurs. The application scope of this function is expanding, for example, to detect clogged filters and deteriorated belts or bearings in conveying machinery by AC drives alone. Our AC drives are not only designed to make motor control more energy-efficient but to increase productivity by predicting malfunctions in machinery and equipment.



## Robotics

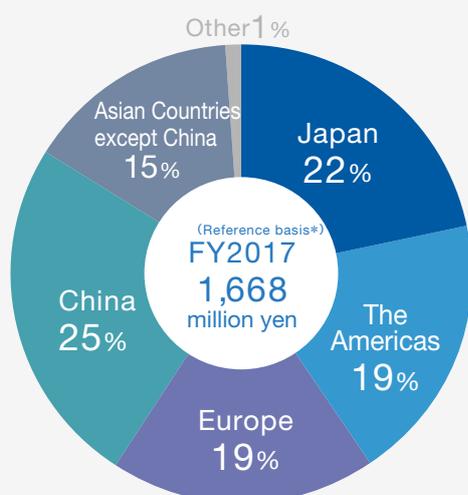
Answering expanding automation needs of production sites to open up new opportunities of use

Executive Officer  
General Manager, Robotics Div.

**Masahiro Ogawa**



### Sales Breakdown by Region



\*Reference-basis figure based on an assumption that the accounting period remained unchanged (from March 21, 2017 to March 20, 2018)

## Strengths of Our Business and Differentiation

- In 1977, we developed the first all-electric articulated robot in Japan called "MOTOMAN-L10." Later on, we became one of the leading manufacturers of industrial robots, and have contributed to automating various fields of industry.
- Furthermore, our servo motor business boasts the largest market share and the most advanced technologies in the world. By insourcing our servo motors, which represent the most crucial performance component in robots, we have attained competitive advantage in the performance of our robots and reduced production costs.
- We offer the most diverse product lineup in the world, including robots for automotive industry, handling robots for general industrial fields, cleanroom robots for LCDs and semiconductors, and collaborative robots. These products allow us to meet a wide range of industrial automation needs.
- We are seeking to expand our operations to new markets in cooperation with the most prominent local manufacturers in various fields with a focus on China, where the demand continues to grow. In particular, we are seeking to expand our business by responding to a growing need for automation on production and assembly lines for home appliances and smartphones.

## Analysis of Business Environment

### Opportunity

- In the field of automotive industry, investment growth and advancement of production technologies associated with the expansion of EV (electric vehicle) production represent great business opportunities for our company. In addition, there are now more opportunities to utilize robots in areas where automation has not developed yet, such as assembly processes or conveying operations between work processes.
- Workforce shortages have become a global issue. The problem of understaffed production sites has been exacerbated by the current situation, and a widespread introduction of robots to production lines currently seems like a viable solution. In Japan, the market for ready-made meals such as production of meal boxes and similar fields of industry that used to rely on human workforce are trying to cope with this situation by stepping up automation efforts.
- Application of robots are expected in the biomedical fields including the medical and pharmaceutical industries. Application of robots are steadily expanding into new markets.
- In addition to conventional automation technologies, the utilization of digital data at production sites has become even more important for creating smart factories and improving productivity. Furthermore, the possibilities to utilize IoT and

AI technologies are being explored through collaborations based on open innovation. As a result, business schemes are undergoing significant changes, which may lead to new business opportunities. In addition to robots, production sites are also equipped with manufacturing devices and processes that include our servo motors. We believe we can further expand our business operations in the future with our special capability to create solutions for our customers by utilizing the data from those devices and processes.

### Business Risks and Countermeasures

- One of the crucial components in our robots is a speed reducer that we obtain from particular suppliers. As the global demand for robots grows, we are aware that the supply of components might be at risk. We are going to utilize our special servo motor technologies to further improve their performance as joint drive modules. In addition, we will strive to build a stable supply chain by expanding our seed technologies.
- The rapidly increasing demand for robots may put a strain on the supply. In addition to enhancing the equipment at our plants in Japan, we are also expanding our plants in China and building a new plant in Europe. We are actively seeking to invest in equipment in order to expand our production capabilities. Our goal is to maximize our production efficiency by optimizing our inventory and implementing seamless production.
- There is a risk of local robot manufacturers becoming the dominant force in the rapidly expanding Chinese robot market. We are going to provide local robot manufacturers with our controllers and servo motors, which represent the core technologies in robots. At the same time, we will seek to cooperate with local robot manufacturers in our business operations to share the market with them, ensure growth, and respond to the market demand.

## Results and Challenges for Mid-Term Business Plan Dash 25 (FY2016-FY2018)

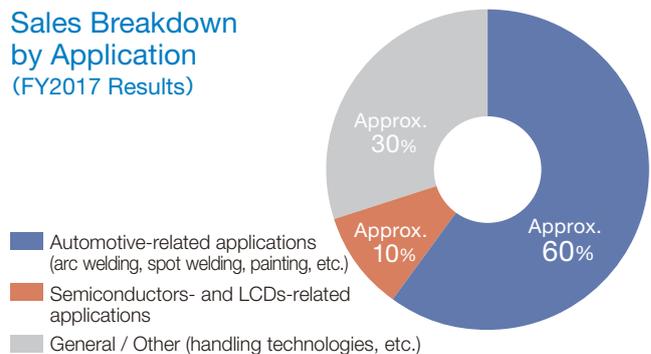
### Results

- We have launched the YRC1000 global standard robot controller, which is compatible with various voltages and safety standards around the world. This controller enables even more accurate and faster movements than the previous models. We have also updated our robot series and added a brand new product lineup in order to improve the compatibility of our products with various types of production line structures.
- We have launched the MOTOMAN-HC10 collaborative robot. Safety fences, which used to be mandatory for the installation of conventional robot models, are no longer necessary. The new model is therefore easier to install and suitable for a wider range of purposes.

### Challenges

- We need to find a proper way to respond to a growing market demand, which is linked to a rapid market expansion. We also need to increase our sales volume by further increasing our market share. Furthermore, we are going to implement a number of measures to materialize the i<sup>3</sup>-Mechatronics concept and increase our sales volume. In addition, we will strive to increase our profitability by improving our production efficiency.

### Sales Breakdown by Application (FY2017 Results)



### TOPICS: Resolving Social Issues through Business

The new YRC1000 robot controller is faster and more accurate than previous models. It is also about 50% smaller and significantly more compact to reduce the amount of space required for production equipment. In addition, robots with a maximum payload of more than 50 kg are equipped with a "power supply regeneration function," which returns the energy generated when the motor decelerates to the power supply. This function serves to reduce energy consumption\* by utilizing power in an effective manner. Power supply regeneration efficiency is particularly high in large handling robots, which can significantly reduce energy consumption.

\*: The degree to which energy consumption can be reduced varies according to the robot type, its purpose of use, and operating conditions at the customer's production site.



## System Engineering

Supporting prosperous life and society through technologies and proven performance accumulated over a century



Managing Executive Officer  
General Manager,  
System Engineering Div.

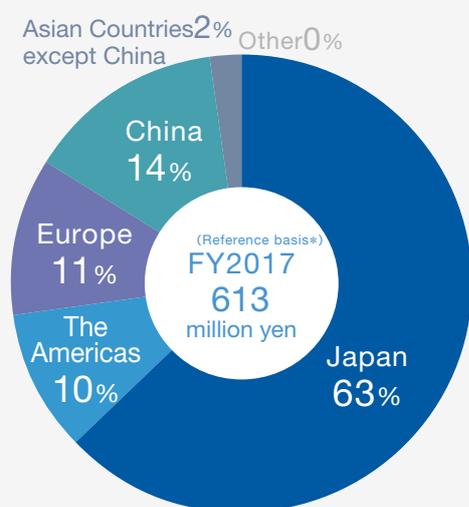
**Hiroyuki Ougi**

## Strengths of Our Business and Differentiation

- In our steel plant business, we provide sophisticated systems with our unique drive technologies and a high level of reliability based on years of experience. We participate in projects already at the equipment planning stage, and provide thorough support throughout the product life cycle, which includes offering technological proposals for improving efficiency and providing after-sales services. As a result, our products are now installed in all blast furnaces that are currently in operation in Japan. This demonstrates how much our customers trust us.
- In our social system business, we provide systems for water and sewer networks and other infrastructure facilities. We provide labor-saving solutions that utilize AI technologies to optimize the water cycle\*, reduce energy consumption, prevent disasters, and solve other issues. These services have enjoyed a very positive reception among our customers.
- Our environment and energy business focuses on providing solutions for issues related to global environment and energy. We are seeking to expand our business operations related to large-scale wind turbines and solar power generation through our subsidiaries in Finland and the US, which we acquired in 2014, since those two countries represent the largest markets for these services. In addition, we provide high-quality products that reduce costs in total systems in order to offer solutions for large-capacity facilities that have emerged as a result of lower power generation costs in the field of renewable energy sources.

\* This is a process during which water moves from oceans and other reservoirs through evaporation, precipitation, downward flow, or infiltration. The water mainly circulates to river basins as fog, clouds, surface water, or groundwater.

## Sales Breakdown by Region



\*Reference-basis figure based on an assumption that the accounting period remained unchanged (from March 21, 2017 to March 20, 2018)

## Analysis of Business Environment

### Opportunity

- The customers we do business with in our steel plant and social system businesses require a high level of service to implement labor-saving measures and maximize efficiency. We believe the latest AI and IoT technologies we use can help us further increase the demand for the solutions our company provides in the future.
- In our environment and energy business, the capacity of power generation equipment is increasing. We are planning to increase our market share by leveraging our high-capacity products, including generators and converters for large-scale wind turbines and PV inverters for solar power generation.
- As a result of the efforts to fight global warming, the ratio of power obtained from natural energy sources (wind and solar) is expected to rise from 5% in 2016 to at least 20% in 2040 on a global scale. In addition, since energy policies in various coun-

tries around the world, including Taiwan and Korea, are moving away from nuclear and coal power, the demand for wind and solar power generation is expected to increase in the future.

### Business Risks and Countermeasures

- As power generation costs for renewable energy sources are decreasing, there is a risk that more and more customers will start looking for cheaper products. We will seek to maintain and increase our added value by providing outstanding products through cost reduction and boosting reliability.
- Some of our customers that produce wind turbines are starting to insource electrical devices through processes like M&A. However, we ensure a steady flow of orders by offering products that are highly competitive both in terms of costs and performance.
- Domestic infrastructure investments related to our social system business are decreasing. In some cases, private companies are hired to build and also manage water and sewer systems. We are focusing our attention on the trends in local government policies in order to respond to these changes.

### Results and Challenges for Mid-Term Business Plan Dash 25 (FY2016-FY2018)

#### Results

- In our steel plant business, we have managed to maintain a steady flow of orders related to updating deteriorated electrical devices. In addition, we have delivered systems that boast high levels of stability and flexibility and managed to shorten idle periods for equipment. We have also sought to make our company stand out by proposing solutions that utilize our robots and the latest AI technology in order to meet our customers' demand for labor-saving.
- In our social system business, we have increased our added value by offering new systems for water and sewer facilities such as remote monitoring systems and chemical dosing

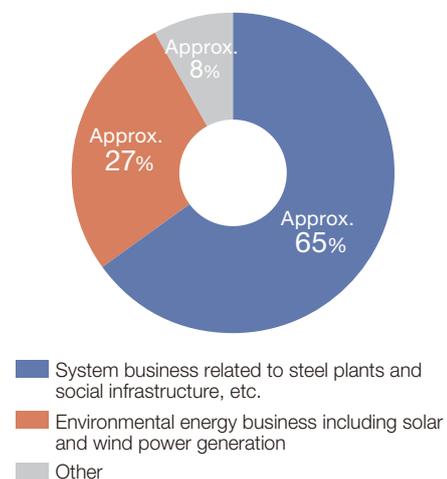
systems that utilize AI, IoT, and other latest technologies.

- The large-scale wind turbine business has been growing steadily. Our European subsidiary in Finland received a large order for electrical devices used for offshore wind turbines.

### Challenges

- The profitability of our solar power generation business is still low. To tackle this issue, we decided to decrease fixed costs by moving our production operations related to PV inverters to the AC drive plant owned by Yaskawa America in the previous fiscal year. In order to make our products more competitive, we need to launch new products as soon as possible and offer them at competitive prices to make them attractive for global markets.
- In addition to an increased demand for equipment updates, our marine drive business is expanding as our customers are seeking to replace their existing ships with hybrid or electric propulsion ships to prepare for the emission control for ships that will be strengthened in 2020. We need to enhance our production system to properly respond to these new demands in an efficient manner.

### Sales Breakdown by Application (FY2017 Results)



### TOPICS: Resolving Social Issues through Business

Exhaust gases from ships contain pollutants that cause acid rain and respiratory diseases. Therefore, there is increasing need for solutions that are friendly to the environment. We have been utilizing our technologies for PM motors, converters, and AC drives in order to decrease the sulfur oxide (SOx) content in exhaust gases from ships, and reduce the impact on the environment.



Electrical devices for ships

# Manufactured Capital



**28** production  
bases in  
**12** countries

Overseas  
production ratio  
**44%**

\*Excluding System Engineering segment  
FY2017 unit basis



No. of factories  
established  
in FY2018

**4**

# Production Capacity Expansion

With four new factories in three countries established in 2018, we will respond to the future demand increase.

As initiatives for automation, labor saving and improving productivity are being progressed on a global scale on the back of a shortage of workers and rising labor costs in China, boosted demand is being seen for mechatronics products like AC servos and robotics. The use of the IoT and AI is also expanding in aiming toward Industrie 4.0, which is further pushing up this demand.

To respond to demand which is anticipated to further expand, Yaskawa is building new factories in four global locations.

## Establishment of a Robot Factory in Slovenia

In order to respond to customer needs in the European market, where major market potential exists, and to create a new supply chain and to supply to the local market in a prompt manner, Yaskawa is planning to establish a robot factory in Slovenia in September 2018.

While Yaskawa has been engaging in robot systems for about two decades in Slovenia, the new robot factory will serve to complete its local capabilities for development, manufacturing, and sales to further bolster its relationship with customers in Europe.

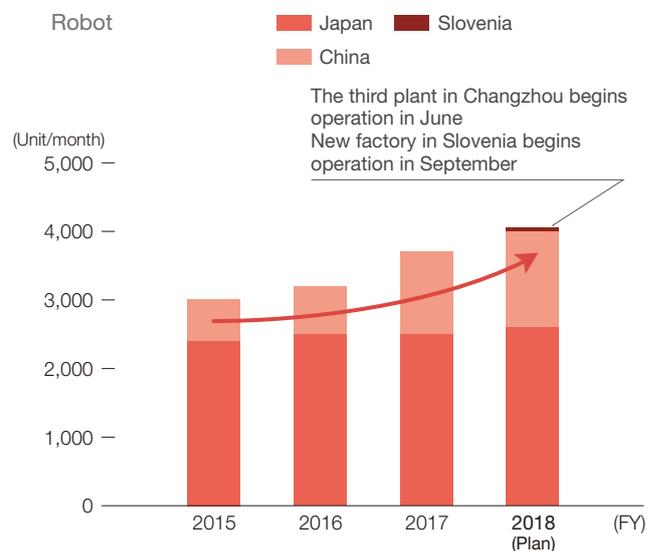
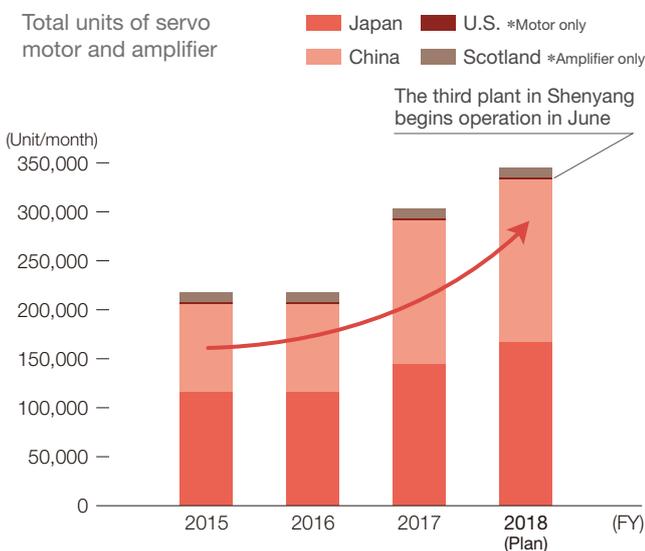
## Enhancement of Manufacturing Capability in China

In China, a place where the mass production of goods such as smartphones and household appliances are concentrated, factors such as decreases in the working population and soaring labor costs are resulting in accelerated large-scale investment in automation and robots. As such, demand is increasing for items such as machine tools and industrial robots. For that reason, the third plant in Shenyang (AC servo production) and the third plant in Changzhou (robot production) just started operations in June, 2018.

## Establishment of the Next-Generation Factory in Japan

The next-generation factory utilizing IoT and AI is established in Iruma, Japan to produce "Σ-7 series," a flagship model for AC servo drive. The factory will verify the new solution concept "i<sup>3</sup>-Mechatronics" to enable flexible operations for the varying models and production quantities. We will realize overwhelming improvement in productivity by establishing a system with which Yaskawa can efficiently supply the products with specifications that customers want.

## Global Production Capacity



# Global Production Locations

Yaskawa group conducts optimum production at 28 locations in 12 countries for its businesses of Motion Control, Robotics and System Engineering with the policies to produce in the areas where the demand is and concentrated production.

We benefit from producing close to our customers in aspects of delivery time and building relations, as well as reduced risks related to forex rates, disasters and geopolitics.

\*Production locations for robotics include system factories.

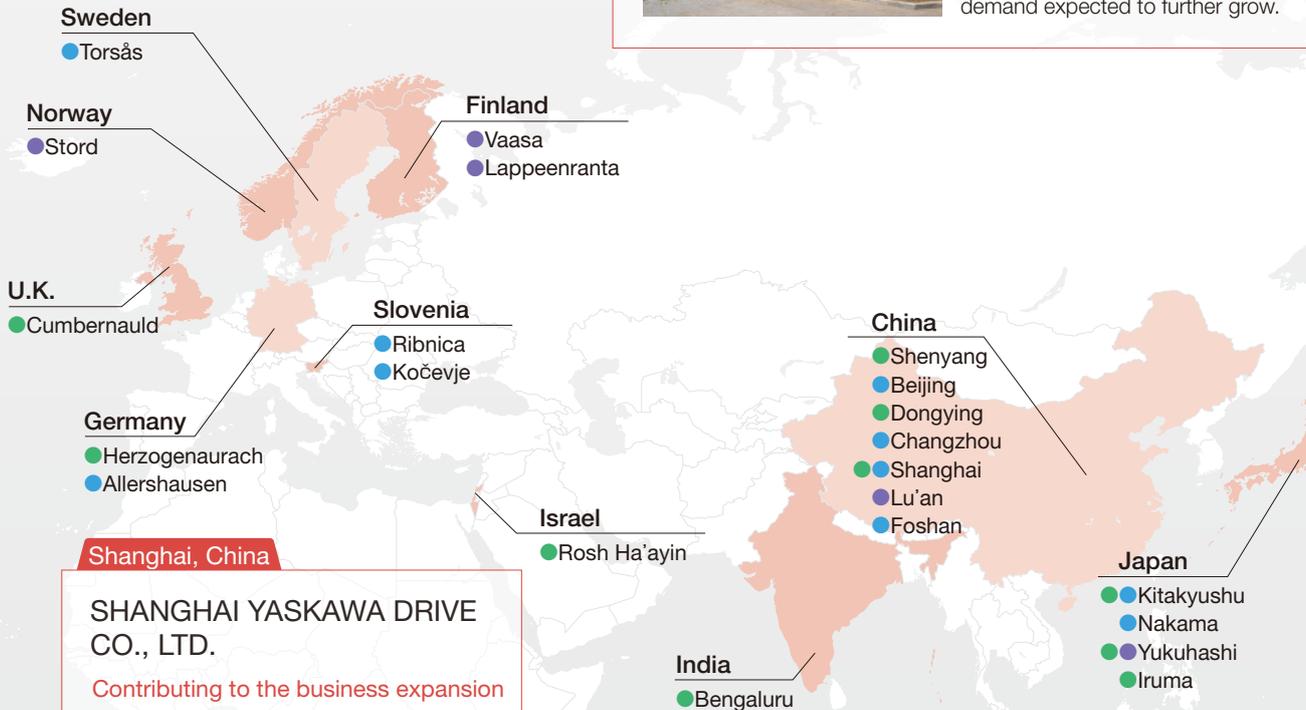
## Shenyang, China

### YASKAWA ELECTRIC (SHENYANG) CO., LTD.

Supplying a robust demand in China as a concentrated production site for AC servo motors and amplifiers



Shenyang plant began production in 2010. Production lines currently run at full capacity to respond to the high demand in China. The facility expansion in 2018 will enhance its capability to meet the demand expected to further grow.



## Shanghai, China

### SHANGHAI YASKAWA DRIVE CO., LTD.

Contributing to the business expansion as Yaskawa's first plant in China



Shanghai plant was established in 1995 as Yaskawa's first manufacturing

plant in China. It started with the production of single-phase motors, and now produces industrial AC drives and PM motors for elevator application. It is supplying the Chinese demand while improving QCD by cooperating with the mother factory in Japan.

## Changzhou, China

### YASKAWA (CHINA) ROBOTICS CO., LTD

Supplying a demand for automation in China where manufacturing for the global market is concentrated



Changzhou plant began production in 2013. It conducts in-house machining of cast products for robots and assembly, and supplies high-quality industrial robots to the Chinese market. The facility expansion in 2018 will increase its production capacity by half to 1,500 units per month.

● Motion control    
 ● Robotics    
 ● System Engineering

**Kitakyushu, Japan**

**Yaskawa Electric Corp. Headquarters (Robot Village)**  
 Supplying globally as the mother factory for Robotics business



Current headquarters in Kitakyushu is where Yaskawa Electric Manufacturing Co., the predecessor of Yaskawa Electric Corp. was established in 1915. In the startup period, it produced motors for use in coal mining. Now the headquarter building and robot factories are located, and together with Yaskawa Innovation Center, the Robot Village welcome many visitors every day.

**Nakama, Japan**

**Yaskawa Electric Corp. Nakama plant**  
 Built on the concept of being "environmentally and human-friendly, fast, and efficient" site, producing mid to large sized robots.



Nakama plant conducts in-house parts processing and assembly for mid to large sized robots. With the third plant completed in August 2015, this facility has not only reduced production lead time by 30%, but also achieved a 70% reduction of VOCs\* emissions.

\*: VOCs (Volatile Organic Compounds) are organic solvents that are also a major source of photochemical smog. VOC emissions from industries that handle large volumes of paint are regarded as a significant issue.

**Yukuhashi, Japan**

**Yaskawa Electric Corp. Yukuhashi plant**  
 Contributing to the global energy saving with two mother factories for Drives business and System Engineering business



Two mother factories for the Drives business and System Engineering business are located in Yukuhashi plant. The plant produces AC drives and medium voltage drives, and the headquarters for photovoltaic and wind generation-related businesses are located, contributing to the global energy saving.

**Iruma, Japan**

**Yaskawa Electric Corp. Iruma plant**  
 Supplying a global demand as the mother factory for AC servo motors and amplifiers



The plant was established as Tokyo plant in 1964. Now the plant supplies globally as the concentrated production site for AC servo motors and amplifiers. A new factory was completed in the first half of 2018, and cutting-edge production technologies such as IoT and AI utilization, as well as i<sup>3</sup>-Mechatronics concept are verified.



# Intellectual Capital



Ratio of  
R&D investment  
to net sales  
**4.3%**

Selected "Top 100  
Global Innovator"  
by Clarivate Analytics  
for the  
**3rd**  
successive year



Portfolio of  
venture investment  
**9**  
companies

\*As of June, 2018

# Technology Development

We conduct technology development globally to support permanent business growth.

## Research and Development Policy

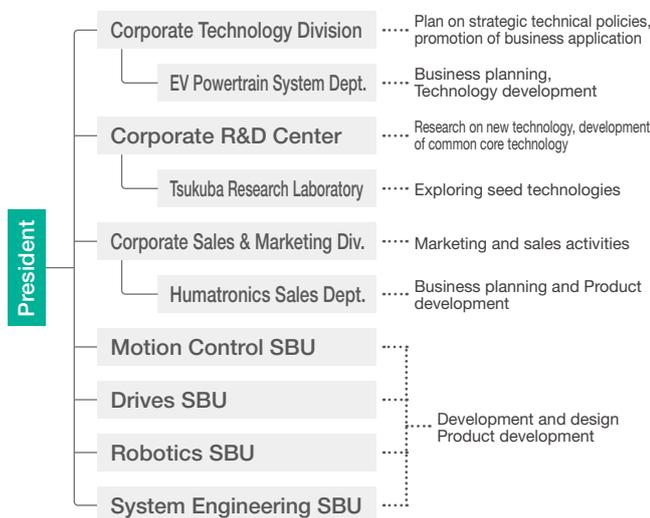
We are working to strengthen our ability to execute global businesses in such existing business fields as motion control and robotics and to turn its success into further product development. In addition, we are pursuing research and development that will contribute to society well into the future, including products in the energy creation/storage/application business domain, which is related to renewable energy systems, electrical drive systems for automobiles, etc., and in the Humatronics\* business domain for creation of new markets in the medical and welfare sectors.

And Yaskawa has also launched i<sup>3</sup>-Mechatronics\*<sup>2</sup>, its new solution concept as it aims to “realize a new industrial automation revolution” as indicated in its 2025 Vision, the company’s long-term business plan. Yaskawa will offer solutions that merge competitive hardware with software and create new value for its customers.

\* 1 Humatronics: Term coined to denote a cross of Human and Mechatronics.  
 \* 2 Yaskawa Electric Corporation registered “i<sup>3</sup>-Mechatronics” as a trademark in June 2014.

## Research and Development Structure

The research and development structure at Yaskawa consists of Corporate Technology Div. that establishes strategic technology policies and promotes them as businesses, Corporate Research & Development Center that develops and investigates new technologies, and a



development and design division that is responsible for product development in each of the company’s SBUs (Strategic Business Units), which collaborate with Corporate Sales & Marketing Div. as they push forward research and development. Both EV Powertrain System Dept., which develops electric drive systems, and the Humatronics Sales Dept., which develops healthcare and assistive products, promote business in the areas of clean power and Humatronics respectively.

## Global Development

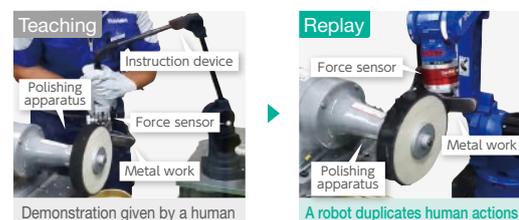
In order to realize i<sup>3</sup>-Mechatronics concept, global development is underway for the development of new products which are compatible with IoT (the Internet of Things) and for the use of AI (artificial intelligence) through a four-pole development structure that consists of Japan, the Americas, Europe, and China, and local development is being pushed at each base location to match the usage methods of products at each individual area.

In 2018, Yaskawa plans to build more factories: a third plant in Shenyang, China (a base for manufacturing AC servos), a third factory in Changzhou (for the production of robots), and a new robot plant in Europe (Slovenia). Through these measures, production capacity will be boosted and the development structure bolstered.

## R&D Results & Topics for FY2017

In FY2017, Yaskawa progressed its development of technology and products by realizing its new i<sup>3</sup>-Mechatronics solution concept in aiming to realize its 2025 Vision. It developed MECHATROLINK-4, an industrial network that realizes more effective and advanced control, and also Σ-LINK II, which enables I/O devices such as sensors to be connected and synchronized. The use of these items not only improves the efficiency of trans-

Concept for instruction and demonstration feature (teaching polishing work)



missions concerning motion control; they also make it possible to synchronize and acquire data from various sensors in a simple manner. Furthermore, through open innovation, Yaskawa has also focused on developing technology leveraging AI, for example an AI picking feature including autonomous learning of various gripping attempts.

In addition, the company has also developed an instruction and demonstration feature where a human shows (demonstrates) examples to teach robots intuitively in order to promote the use of robots for delicate contact tasks like polishing that require skills. This feature reduces the burden on users with regard to teaching tasks and also significantly reduces the startup time for robot systems.

Yaskawa will contribute to productivity improvement along with new manufacturing initiatives by customers,

leveraging IoT and AI.

As for the area of humatronics, Yaskawa has been selling CoCoroe AR<sup>2</sup>, a device for the rehabilitation of the upper limb, since September 2017 in its efforts to support rehabilitation.

CoCoroe AR<sup>2</sup> makes it possible to frequently conduct rehabilitation training for long periods of time and reduces the burden on therapists. CoCoroe AAD, introduced to the market in January 2018, is a device that provides assistance for the ankle and supports the joints during walking practice by people who have difficulty walking.



CoCoroe AR<sup>2</sup>



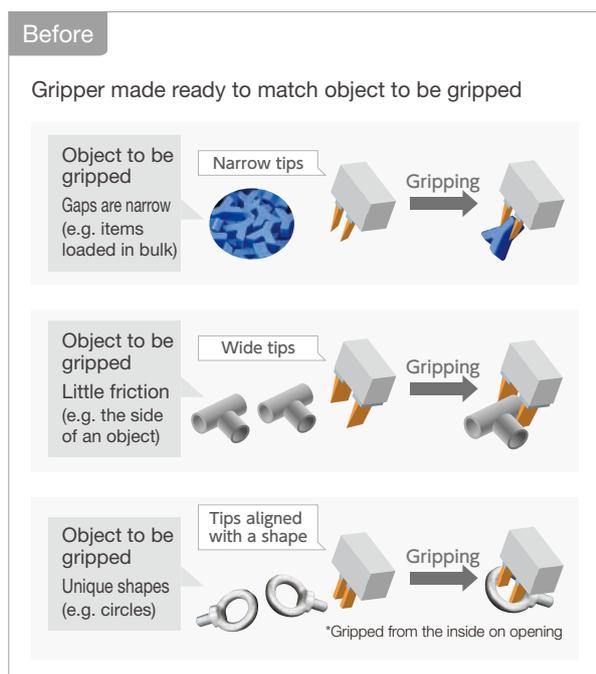
CoCoroe AAD

## Status of Collaboration in Technical Development with Venture Investment

Yaskawa aims to realize i<sup>3</sup>-Mechatronics through fusion of core technology advancement and open innovation. As part of that, it initiated a capital tie-up in 2017 with XCompass, Ltd., a company that offers consultations on mechanical learning and data analysis services as well as development of AI platforms and new algorithms. And in 2018, Yaskawa established AI<sup>3</sup> (AI Cube Inc.) for the purpose of developing AI solutions for manufacturing and industrial robots. This new company will take advantage of

Yaskawa's big data collection ability in the field of manufacturing, to accelerate the development of AI technology utilizing big data, accumulated mainly via the products from following businesses; AC Servo Drives, Drives, and Robotics. Forming a strategic alliance with XCompass, the company is developing autonomous AI picking features for robots, such as object recognition, self-formulation of gripping method and various gripping attempts, and it will continue its efforts for accuracy improvement.

### AI picking features for robots



# Intellectual Property

We aim at obtaining global patents of high quality that will contribute to business.

## Basic Concept of Intellectual Property

Yaskawa Electric respects third-party intellectual property while using its own intellectual property to actively protect its products, giving them an edge on the market.

## Positioning of Intellectual Property Activities in the Management

Our intellectual property activities are part of our business strategies as well as R&D strategies, and we are working globally on creation, protection and application of intellectual property.

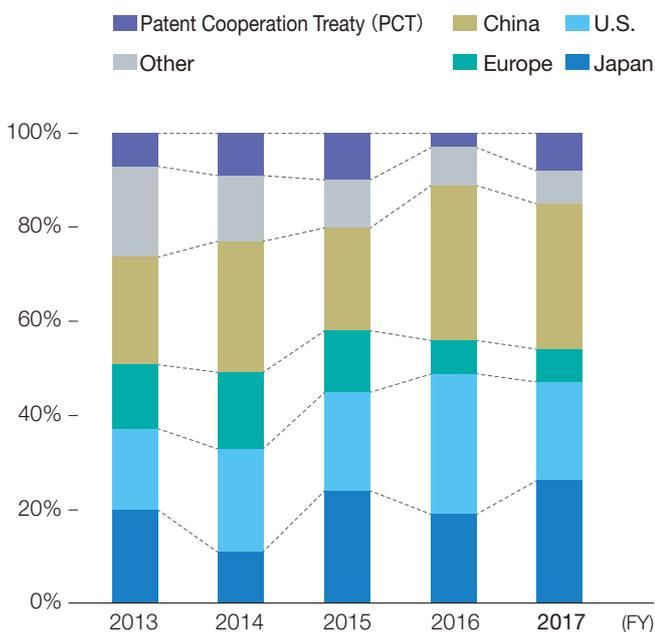
## Intellectual Property Activities

The intellectual property division, which provides company-wide supervision, and staff positioned within the R&D division and business divisions promote activities that are tied closely to each department.

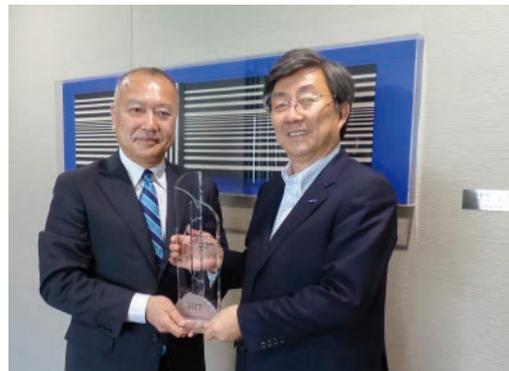
## Status of Intellectual Property Rights

Each country promotes to secure intellectual properties as the graph below shows.

### Application Ratio by Country



## Yaskawa Received 2017 Top 100 Global Innovators Award



President Ogasawara (Right) receiving a commemorative plaque

Yaskawa was selected a "2017 Top 100 Global Innovator" by Clarivate Analytics (head office: Philadelphia, USA), a global company that offers information services, for the third consecutive year.

Top 100 Global Innovators is a selection of the 100 most innovative companies in the world based on an assessment of their number of patents, success rates, global nature, and impact patents made in quotes (assessment goes back five years; assessment made on the past three years solely for the global nature of a company) and an analysis of their trends for patents and intellectual property.

At Yaskawa, where we consider ourselves to be founded on technology, we push forward our research and development with partiality in being the first and the best in the world. The Top 100 Global Innovator that we have received for three years running is a great honor, and it serves as tremendous motivation in furthering our activities.

Yaskawa will continue to deploy initiatives combining its business division and research and development division in a united manner and aim to obtain global patents of high quality that will contribute to business.

# Human Capital

Voluntary retirement ratio (unconsolidated)

less than **1%**

\*Five years from 2013 to 2017

Frequency rate of work accidents (unconsolidated)

**0.20**



Ratio of employees outside Japan (consolidated)

**56%**

# Employee Relations

In order to bring out the full potential of the diverse human resources, we are furnishing pleasant working environments where people can work with a sense of security.

## Creating a Workplace that is Worth Working For

### Workstyle Reform

At present, Yaskawa initiates workstyle reform in aiming to achieve Vision 2025, the long-term business plan. Under the basic concept to create a company worth working for from the perspective of employment patterns (time management), work productivity, and treatment (evaluation/remuneration), this reform is underway with the major pillars; a reform in the personnel system that focuses on a revision of the evaluation system, and a reform in the working hour management system that responds to the social landscape such as the workstyle reform bill, etc.

### Employee Satisfaction Questionnaire

Since FY2016, an employee satisfaction questionnaire survey has been conducted each month on all regular employees of Yaskawa Electric. As well as measuring understanding and penetration of management measures, the sense of tightness

in the workplace, and satisfaction levels on the personnel system through the questionnaire, it is also aimed at resolving various issues faced by employees and generating a corporate culture where management and all employees are unified in looking toward the achievement of Vision 2025, our long-term business plan, and our mid-term business objectives.

The questionnaire response rate exceeds 90 percent each month, and various opinions and requests are being received. Efforts are being made to disclose analyses of the survey results within two weeks and to provide feedback on all opinions and requests.

### Employee Stock Ownership Plan

A Yaskawa stock ownership plan is held as part of the company's benefit package. This is a system for employees of Yaskawa Electric and its affiliated companies where incentives can be added to funds as allotments for the purchase of stocks.

## Human Resources Development

The basic policy of the company is to offer venues for employees to make challenges and to develop through communication to encourage growing and fostering to nurture individuals who have the passion to contribute to global business.

### Early-Stage Development of Young Resources

Yaskawa Electric is pushing forward its human resources development envisioning as its desired image of a young employee (less than five years with the company) a person who thinks logically and communicates appropriately to the other party. Also, in order to have new employees in technical area learn a certain level of technical knowledge (scope and depth), we have been holding Yaskawa Freshers Technical School (YFTS) since FY2017. Through these measures, Yaskawa is conducting initiatives so each individual will be able to perform to their fullest ability in business situations.



Opening ceremony of Yaskawa Freshers Technical School

### Interactive Gatherings with Management

Yaskawa is making company-wide efforts to promote a unique style of individual development with emphasis on direct dialogue (interactive gatherings) with management. The company president took the reins for promoting the development of Yaskawa employees and is making efforts to improve human resources development while expanding the circle of communication with employees and embracing the motto to develop individuals who will take on the future of Yaskawa Electric as it evolves. Through interactive dialogue, the company is improving the motivation among participants and strengthening the development of people who make challenges.

#### Passion of President Ogasawara

Nurturing individuals who can change any situation into an opportunity and perform to his or her fullest abilities!  
Creating Yaskawa that is true to its style of evolving while continuing to contribute to customer value!  
Making a Yaskawa Group that is rich with diversity and can communicate effectively with society!



At an interactive gathering

## Initiatives Aimed at Sound Labor Relations

Yaskawa's labor union began as the Yaskawa Electric Manufacturing employees' union on December 25, 1945 and later changed its name to Yaskawa Workers Union, which is currently under the Japanese Electrical Electronic & Information Union ("JEIU").

The number of union members, including associated companies, stands at 2,901 as of February 28, 2018 and there is no labor union organized for part-timers or contract employees. Yaskawa also organizes Yaskawa Group Union, comprising Yaskawa Workers Union, Y-E Data Workers Union, Yaskawa Engineering Workers Union, and Yaskawa Siemens Automation Drive Workers Union, under JEIU.

In order to conduct smooth operations based on its administration rights with understanding and trust from the union, the company holds a joint management council for the company

president, managements and workers union officials once every half-year to discuss business and labor issues, as well as a regular monthly meeting to share and discuss business situations and other topics. A labor-management committee is also held to improve working conditions and treatment of union members.



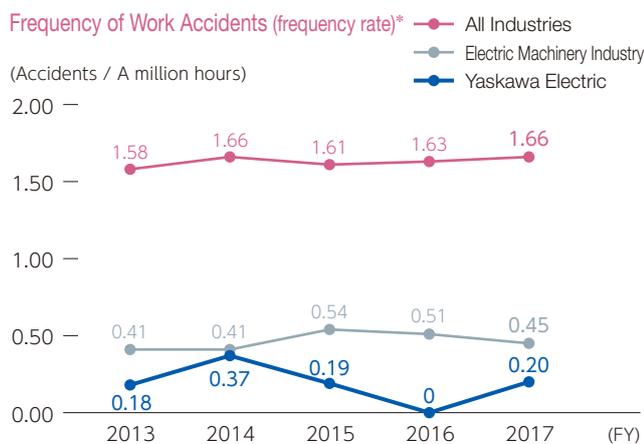
Labor-Management engagement

## Initiatives to Improve Industrial Safety and Health

Based on the concepts of its industrial safety and health, Yaskawa initiates creation of standard manuals for safe work at each workplace, training & education and risk assessment, along with disaster preventing activities for daily works. Internal audits are also conducted to check if these activities are relevant to both of its health and safety policies and the achievement of the objectives followed by improvement activ-

ities, which results in remaining below industry average for its incidence rate for work accidents.

Yaskawa also established a 10-year plan for mental and physical health in 2016, actively initiating health promoting activities together with its employees, supervisors, health and safety managers in each locations, and industrial healthcare workers.



\*Frequency rate: Indicates the frequency of occurrence of accidents by the number of casualties due to industrial accidents per one million gross hours of actual work. Calculation method: (Number of casualties due to industrial accidents/gross hours of actual work) × 1,000,000



Health and safety patrol

### Health Support for Employees

Yaskawa provides various kinds of medical examination, with full consideration for relevant laws and regulations as well as the characteristics of each test, to realize organic and effective health support, which include learning workplace environment and selecting examinees as well as conducting tests and follow-up measures. It also offers healthcare guidance and education along with prevention of illness in the course of employment, focusing on assisting employees with their daily and/or working matters.

### Steps for Mental Health

Yaskawa positions psychiatric illnesses and disabilities as diseases that can happen to anyone, just like other diseases,

and offers support to their daily and/or working life as necessary.

As part of its measures against psychological stress, which can have various effects on an employees' health and their daily life, a stress check system is introduced to feedback employees as well as their workplace based on the results.

### Support for People on Sick Leave to Return to the Workplace

When employees return to their workplace after taking long leave due to inevitable sickness or injuries, we prepare the maximum possible physical support structure and physical environment to support them in collaboration with the individuals, as well as their superiors, the administration department, and the industrial doctor.

## Work-Life Management

In line with changes in the state of the economy and the way of society, it is indispensable for the medium- to long-term growth of a company to have each and every one of its diverse employees perform up to their maximum capacities. For that purpose as well, Yaskawa aims to make workstyles lively and productive, manage work-life balance, and create a workplace environment where people can work with a sense of security.

### Improvement in Childcare and Family Care Support System

In FY2017, Yaskawa introduced a system where employees can obtain accumulated holidays by units of hours, and it has also introduced a work-at-home system and a leave system due to overseas transfers of spouses. It has increased choices for workstyles and supports a balance between childcare, family care, and work.

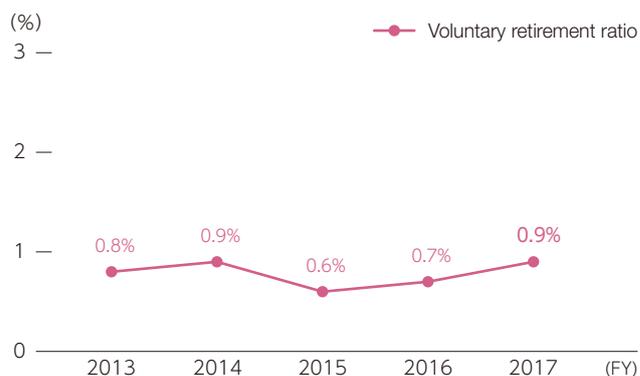
### Initiatives to Promote Employees to Take Annual Leave

As one of its initiatives to create itself a company that is worth working for, initiatives between business and labor is underway to promote employees to take annual leaves of 15 days. To be specific, five-consecutive-day leave is recommended and many employees use this system. The purpose

of this initiative is not only to promote improvements in work-life management by having people take leave; it also aims to have each and every one of its employees be aware of work efficiency to improve the workplace environment by eliminating "unreasonableness," and "waste."

The voluntary retirement ratio has been transitioning at below one percent in the past five years by creating a workplace environment where people can work with a sense of security with these measures.

### Transitions in Voluntary Retirement Ratio



## Promotion of Diversity

In Vision 2025, our long-term business plan, we set a target of diversity promotion (diversity in our human resources) and are making efforts to create a culture where we can leverage the strengths of diverse human resources. Aiming to advance the company and strengthen its competitiveness in order to respond to a rapidly changing global market promptly, we have positioned the three following items as our mission in promoting diversity in our human resources:

1. To construct a corporate constitution strong against environmental changes by adopting and fostering human resources with diverse values and ways of thinking.
2. To incorporate diverse opinions and viewpoints to create a corporate culture where innovation arises as a matter of course.
3. To realize a satisfying working environment by eliminating all factors of discrimination and respecting the individuality of employees.

### Results for FY2017

The promotion of work-life balance through workstyle reform is key for promoting diversity and also, we position that balance as being indispensable for corporate development and are initiating it positively. Through such measures as flexible hours, taking accumulated holidays by unit of hours, and the use of the system for working at home, the employees are now able to work in more flexible and more diverse ways. We will continue to expand those eligible to make this system easier to leverage.

In support of life events, we have also hosted discussions with bosses who support employee childcare and made efforts to create frameworks for people who take childcare leave so maternity and childcare would not become detrimental to their careers (leaving work, slowdowns in career development).

Furthermore, as part of our social contribution activities, we continue to hold Girls' Days\* for junior high school students



Girls' Day

with hopes that they would become interested in technical jobs.

\* : Girls' Day is an event that originates in Germany, where introductions are offered for jobs in the science and engineering field which may not be too familiar in everyday life, piquing the interest of participants as they have fun.

### Status of Progress on Action Plan Based on the Act on Promotion of Women's Participation and Advancement in the Workplace

Two years have passed since we established our action plan, and we are gradually seeing results in work areas for women and for increased numbers of hires, however, the ratio of female managers remains unchanged. We will continue to focus on offering career support through such measures as exchanges with outside parties and collaboration plans with other companies.



"Career Stretch Forum" held jointly with other companies

### Promotion of Diversity in areas Other than Gender (e.g. people with disabilities, those who are providing nursing care to family members, foreign nationals, etc.)

Our company is aiming to become a company where a diverse array of people can work actively, each in their own way. On our promotion for diversity in areas other than gender, we have distributed interviews internally on the Intranet from the angle; "people with disabilities", "people who are engaged in nursing care for family members" and are making efforts to create a culture so it will become an awareness for cooperation.

As for our robotics business division, we have accepted employees with foreign nationalities from our Group for a short term (around a month) and have gone beyond cultures and languages and deepened our mutual understanding through work and are aiming to strengthen ties with our foreign subsidiaries and create opportunities for collaboration.

### Regular Employee Gender Data of Yaskawa Electric (unconsolidated)

As of February 28, 2018	No. of regular employees	Ratio	Avg. Age	Avg. number of years in employment	Managerial position	Ratio	Assistant manager	Ratio
Females	346	12.4%	40.4	17.6	5	0.8%	24	3.0%
Males	2,441	87.6%	41.6	18.5	616	99.2%	772	97.0%
Total	2,787	100.0%	41.4	18.4	621	100.0%	796	100.0%

# Social and Relationship Capital

No. of visitors to  
YASKAWA Innovation  
Center exceeded  
**100 thousand**

\*June, 2018

Total no. of  
institutional investors  
met in a year  
**Approx.  
1,300**

No. of companies  
responded to the  
conflict minerals  
questionnaire  
**556**



## Relations with Local Community and Society

We promote activities to coexist with local communities, which is set forth in our long-term business plan “Vision 2025” for maintaining and enhancing good relationship with our stakeholders.

### Activities Leveraging Robot Village

Since Yaskawa opened Robot Village at its head office in Kitakyushu on June 1, 2015 as part of its 100th anniversary project, the YASKAWA Innovation Center, an integral facility at the village, has welcomed more than 100,000 visitors as of June 2018. Embracing our hopes to nurture children who are our future and to express our appreciation to the people of the community who have supported us since our establishment, our guides and every one of our staff members aim to deliver the appeals of Yaskawa to the visitors to deepen their understanding for our company.

We will continue to use Robot Village as a contact point that ties Yaskawa with the community by continuing to vigorously take part in local events, offer inspection tours to customers from both Japan and abroad, and as an avenue for communication between industry, government, and academia for our group to co-exist with the community.



At the ceremony to commemorate the 100,000<sup>th</sup> visitor to YASKAWA Innovation Center



Robot Village was utilized as one of the venues for a local festival held in May 2018

#### Activities in FY2017

We invited 79 students in their second year at Fukuoka Prefectural Tochiku High School, designated by the Ministry of Education, Culture, Sports, Science and Technology as a Super Science High School (SSH), to YASKAWA Innovation Center and held an experience-based event to boost their interest in science and technology. In addition to offering tours of our facilities, we also offer additional programs based on a desire to further nurture creativity and expressiveness among our visitors, which include preparatory facilitation training for group leaders and a lecture by the director of the Innovation Center on “The World in the Near Future based on AI and Deep Learning” as we continue to make efforts to offer attractive opportunities to develop human resources.



Students working on brain-storming

And in October 2017, the Emperor and Empress of Japan visited YASKAWA Innovation Center and watched a Yaskawa employee walk using ReWalk, our wearable robotic exoskeleton that assists independent, controlled walking, and our biomedical robot for automated pharmacy orders. Yaskawa held an industry-government-academia meeting to exchange opinions on regional revitalization in January 2018 in our head office auditorium, attended by Hiroshi Kajiyama, Minister of State (Regional Revitalization, Regulatory Reform), Kozo Yamamoto, former Minister of State (Regional Revitalization, Regulatory Reform), Mayor of Kitakyushu, president of Kyushu Institute of Technology, president of University of Occupational and Environmental Health, Japan, vice president of University of Kitakyushu, and Yaskawa President Ogasawara and Director Nakayama.

## Activities in India to Coexist with the Local Community

### President & CEO at Yaskawa India Received Outstanding Contribution to Society Award

Akinori Urakawa, president & CEO at Yaskawa India received Outstanding Contribution to Society Award as one of 50 individuals who have made a contribution to India, not only for technical fields such as science and medicine but including a wide range of areas such as finance, economics, the arts (film), and sports, selected by Hindustan Group of Institutions, a private educational organization based in southern India that operates seven educational facilities including Hindustan University. As part of its corporate activities, Yaskawa India aggressively and in a broad manner offers welfare support and sports exchanges and also introduced Yaskawa's industrial robot MOTOMAN-MH5 to the engineering research department at Hindustan University in 2015 as part of the diverse support that it offers. Doctors and students conduct development on a daily basis on practical technology that merges basic technology for inspecting defects and deburring quality in casting that is useful for local industry and automation technology through the use of robots.

### Social Contribution Activities at Yaskawa India

#### Supporting People with Disabilities

Yaskawa India took part in a WALK-A-THON that is an annual event in Bangalore. Held for the 13th time in 2017, the event is held for the purpose of deepening interest and understanding for people with disabilities to



A scene of the march

support them with local community as a whole, and this was the third time for Yaskawa India to take part. The march was held on the day under a sunny sky led by people in wheelchairs with participants following cheerful elementary school and junior high school students as they walked along the course from the stadium to the town.

#### Development of the Next Generation

As part of its CSR activities, Yaskawa India makes donations to various schools every year. The overall literacy rate in India is around 70 percent, and to improve this, the Indian government offers eight years of compulsory education to children between the ages of six and 14 and also engages in initiatives to improve existing facilities for the purpose of bettering its education standards. Yaskawa made a donation to a local government higher primary school. We visited the school on the day and donated a water storage tank, set up a stairway, and cleaned and repaired the school building besides offering our donation money, and were rewarded with a dance and song performance by many pupils. We hope that the facilitation of an environment will be more comfortable for the children of India to study, and will continue to make aggressive efforts in various activities to contribute to Indian society.



At the local government higher primary school

# Relations with Customers

We aim for improving customer satisfaction through assuring safety and security with our customer first policy.

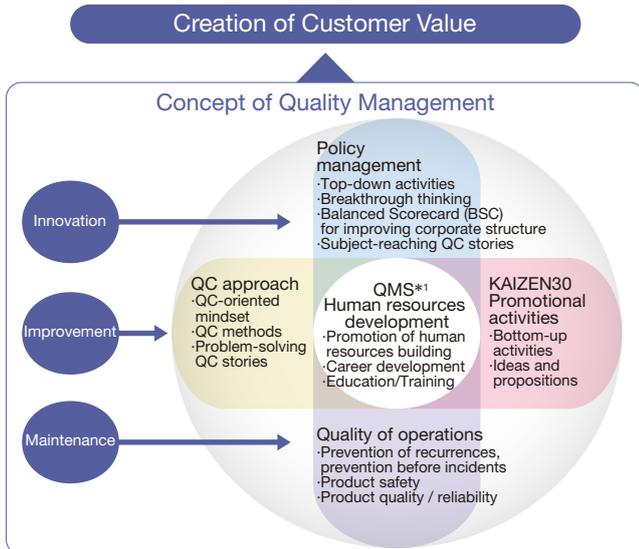
## Initiatives for Delivering Satisfaction

The mainstay of our management philosophy is “to maintain a strong commitment to meet the needs of customers”. This tradition has continued since the startup period till today. The Yaskawa Group aims to achieve total customer satisfaction (CS) by offering not only the quality of products but also quality of service and creation of customers’ value.

### Practicing Management Based on CS Principles

Yaskawa aims for the improvement of customers’ value through management based on CS principles. This is an initiative to improve the quality of our work and productivity to create value for our customers. We are also holding interactive gatherings between executives and employees, among other such measures, to disseminate the CS philosophy.

#### Quality Management Practices Based on CS Principles



\*1 : QMS=Quality Management System

### Initiatives to Improve the Overall Quality of Our Work

K30 activities (K: koritsu, or efficiency; 30: 30 percent improvement) are activities for improving the productivity of each individual.

We value correlations between key goal indicators (KGIs) and key performance indicators (KPIs) and deploy our top-down K30 activities as we aim for improved productivity from the management standpoint. Additionally, we practice our QC stories through our improvement activities under the slogan, “full participation for greater than 30 percent improvements in work efficiency” in our KAIZEN30 initiatives to boost our capacity to resolve issues and challenges that will tie in to an improvement in our corporate structure.

#### Initiatives to Improve the Overall Quality of Our Work



### Penetration of Quality Improvement Capability

We fulfill our social responsibility as we develop a culture and capacity for improvement of quality of our work. In particular, we aim to increase our capacity for quality based on a foundation of KAIZEN activities and stronger human resources development, and to build quality into our products through an emphasis on processes.



## Initiatives to Ensure Safe Use

### Product Safety

In order to make sure that our customers use our products with confidence, the most important thing for us is product safety assurance from the very beginning. This is why at the product development stage we perform risk assessments to make sure that products are sufficiently safe, make our products compliant with international standards, verify them and hold safety inspection meetings, among other initiatives.

We also respond immediately and appropriately in case of trouble and have a global emergency communications network in place.

We also do internal training and provide activities to raise awareness of product liability. Our Buds of PL initiative\* is a continuous activity that aims to bring an awareness of problems to internal and external safety information and constantly pursue high targets.

\* : Buds of PL (product liability) is a program for fostering a culture that uses near-accidents, etc., to nip product liability problems in the bud (i.e., develop a product safety culture) and thereby fulfill our product responsibility; it is also a general name for all safety improvement initiatives.

### Activities to Build in Product Quality and Reliability

The causes for market defects in products are largely broken down to two factors: issues involving the design and issues involving parts, and are said to comprise 60 to 80 percent of all causes. In order to build in quality and reliability from the start of its development, Yaskawa sets up environmental resistance levels for each product to meet market/usage conditions at planning stage, and makes efforts to design and evaluate its products by leveraging tools and methods such as simulations, quality engineering, and HALT. Additionally, it pursues appropriate quality in the parts and materials.



Activities to look for appropriate quality in adopted parts

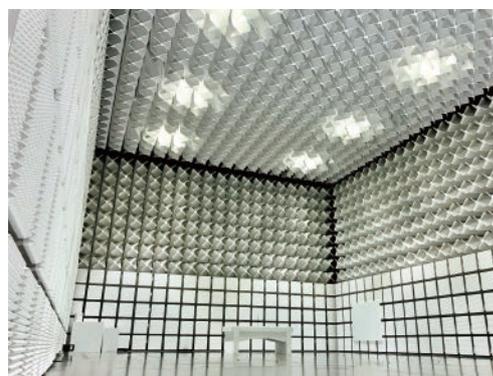
### Quality Improvement

Defects information from customers is collected and analyzed online by our company-wide Field Quality Information System and reflected in quality improvement initiatives. In particular, this process leads to cross-organizational deployment to prevent recurrence and initiatives to prevent problems during new product development.

### Strengthened Measures to Meet International Safety Standards

As various electric and electronic devices are used all over the world, and manufacturers are demanded to ensure EMC\* scale for their products not to create electromagnetic noise that will impact peripheral devices, systems, and the social environment on a global scale. Setting up an EMC testing facility at its head office in FY2017 and receiving a certification from TÜV Rheinland as the designated laboratory, Yaskawa has become possible to conduct everything from tests to obtaining certification in a consistent manner. This has enabled us to not only reduce the development time but also supply safer, securer mechatronics products to our customers in a prompt manner.

\* EMC: Abbreviation for Electromagnetic Compatibility: refers to the absence of negative effects on the movements of other devices or systems caused by electromagnetic interference released by the motion of electric or electronic devices, or the lack of impact received by electromagnetic interference from other devices or systems to procure proper functionality in a continuous manner.



Interior of EMC testing facility

# Relations with Suppliers

At Yaskawa, in order to procure goods which meet our requirements for quality, costs, and delivery times, we have mutual trust and cooperation with our partners and make efforts to maintain and improve these relationships so that each of us may continue to thrive and prosper.

## Basic policy for procurement

### Fair Trade

We practice fair trade founded on a basic trade contract to ensure that both Yaskawa and our suppliers fulfill our respective social responsibility for compliance and environmental protection. We select new suppliers based on an evaluation of the quality, price, delivery, management information and environmental requirements.

### Open Door Policy

We provide equal and fair trading opportunities based on free competition in transactions by opening widely the door to the world in search of new suppliers.

### CSR-Based Procurement

Through fair trade that complies with corporate social responsibility (CSR) and the law, we work to build partnerships with our suppliers.

### Green Procurement

We formulated the Green Procurement Guidelines for the purpose of procuring materials with low environmental impact, and we work with our suppliers to conserve the global environment. We also closely control hazardous substances following our environmental management system.

## Initiatives for Handling Conflict Minerals Provision

Some minerals (tin, tantalum, tungsten, and gold) which are produced by the Democratic Republic of the Congo and its neighboring countries are called Conflict Minerals due to concern that they may be financing armed forces that conduct illegal acts such as human rights violations and acts of violence. Our "Guidelines on the provision for conflict minerals" were established in 2013 to make clear Yaskawa's policies for handling Conflict Minerals. Through these efforts, the company is making sincere efforts on the issue of human rights in the area around Congo which will tie in to eliminating the inflow of funds to armed forces.

In order to realize its principle of management to contribute to the well-being of humankind, Yaskawa, together with its partners, will take concrete steps through its business to respond to the issue of Conflict Minerals Provision.



Both the scope of the questionnaire and the response rate have been improving since the survey began. According to the survey, the use of raw materials that will finance armed forces has not been confirmed to date. In the event that raw materials are discovered to be financing armed forces, Yaskawa's policy is to make a prompt replacement.

### Status of Activities

FY2013	FY2014	FY2015	FY2016	FY2017
● Development of work structure		● Development of survey system		
● Compilation of guidelines				
● Compilation of internal rules				
● Held briefing for partners (continue to request cooperation at supplier meetings held every six months)				
● Commencement of survey				

# Relations with Shareholders and Investors

Yaskawa aims to be a corporation that is trusted by shareholders, investors, and all its other stakeholders. To that end, we are working to realize management with a high degree of transparency by means of prompt, appropriate, and fair information disclosure.

## Basic Rationale on Information Disclosure

Our company clearly indicates the following policy in "Guidance on Yaskawa Group Code of Conduct":

- To protect not only its own information but also important information of other companies and personal information, and to discourage and tolerate no insider trading
- To comply with company information disclosure rules and strive to disclose correct information in a timely manner

Based on the above, Yaskawa discloses information while adhering to laws and regulations including the Financial Instruments and Exchange Act and regulations pertaining to timely disclosure as stipulated by stock markets where company stocks are listed. It also proactively discloses information for which this is not applicable but is believed to have practical impact on investment decisions as well as information believed to be useful for deepening understanding on our company in the interest of fairness and appropriateness.

## Investor Relations Activities in FY2017

The Yaskawa Group positions IR activities as two-way communication with shareholders and investors. We provide the opinions of shareholders, investors, and other stakeholders as feedback to management. In this way, we strive to improve our corporate value.

In FY2017, we worked to exchange information with institutional investors within and outside Japan by holding a total of roughly 420 meetings with approximately 1,300 investors. We also held briefings on financial results for institutional investors and securities analysts twice a year. And in order to promote understanding of Yaskawa, we provide opportunities to see our products and services up close through visits to our locations both within and outside Japan, plant tours,

and booth tours at exhibitions.

We visit financial institutions and participate in conferences organized by securities companies in Asia, U.S. and Europe in order to exchange information with global shareholders and investors who have less opportunities to communicate with on a regular basis. We also accept telephone interviews.

In order to create opportunities to communicate with individual investors, we participated in two investment fairs in FY2017. Also for the enhancement of fair disclosure, we are making continuous improvements in the information disclosure using our website.



A plant tour in Shenyang, China

# Natural Capital

CO<sub>2</sub> emissions controlled through Yaskawa products

**2.28**

million tons of CO<sub>2</sub>/year



Green products sales ratio

**20.0%**



Ratio of renewable energy comprising power consumption at business bases in Japan

**3.79%**

# Environmental Management

We are promoting environmental management in order to pass on the earth's blessings to the next generation.

## Environmental Policies of the Yaskawa Group

### Environmental Philosophy

Based on the Management Principles of the Yaskawa Group, we recognize that the conservation of the global environment is one of the most important issues for all human kind. In every stage of our business operation, we contribute to the realization of a sustainable society through our proactive environmentally conscious actions.

## Yaskawa Group's Vision and Long-term Plans for the Environment

Together with its stakeholders, the Yaskawa Group aims to create a society that is sustainable.

It plans to make contributions for the environment by reducing the burdens that result from its manufacturing activities (its green process) at a greater rate than it has to date, and by reducing the burden on the ecosystem with its products (green products) leveraging its technology to enhance the environmental performance.



### FY2025 Target

#### Green products

- Reduction of environmental loads through products CO<sub>2</sub> emission control by 69 million tons\*<sup>1</sup>
- Installation of the in-house environmental products and displaying them
- Improvement in recyclability of product components
- Application of green procurement to all products

#### Green processes

- Reduction of GHG emission by 10%\*<sup>2</sup> Reduction by 15% by 2030
- Reduction of waste by 1% every year\*<sup>3</sup>
- Appropriate management of use and waste of water
- Through management of harmful substances in production

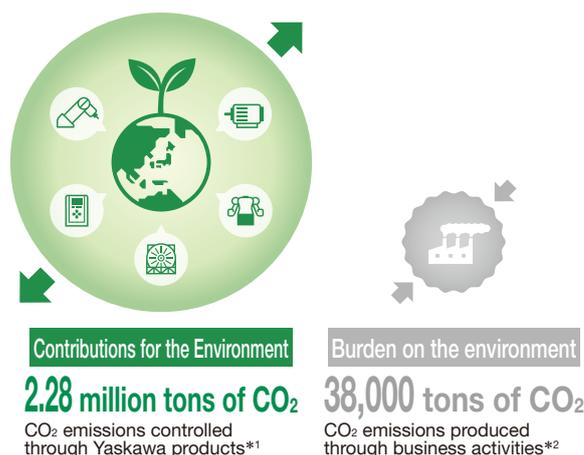
\* 1: Cumulative total after FY2016 \* 2: Compared to FY2015  
\* 3: Per unit of sales

## Contributions to the Environment by the Yaskawa Group

The Yaskawa Group contributes in creating a sustainable society through its overall business activities.

In FY2017, the use of Yaskawa products in various parts of the world led to a reduction of 2.28 million tons of CO<sub>2</sub> emissions.

CO<sub>2</sub> emissions produced through its business activities stood at 38 thousand tons.



\* 1: Estimate of reductions in CO<sub>2</sub> emissions for which Yaskawa products delivered in FY2017 have contributed when used for a period of a year  
\* 2: Total amount of CO<sub>2</sub> emissions in FY2017 for Yaskawa Electric and its major consolidated companies in Japan and abroad (14 companies in Japan, nine companies abroad)

## Green Products Initiatives

To enable dramatic improvements in energy-saving and productivity for its customers and to reduce the burden on the environment on a global scale, Yaskawa has in place a system to certify green products.

Yaskawa makes score evaluations of the contribution level of its products on the environment from three standpoints to prevent global warming, saving resources and recycling, and appropriate management of chemical substances, based on which it certifies items that meet the required standards as Green Products and those that demonstrate the highest level of environmental functionality as Super Green Products.

The sales ratio for super green products and green products in FY2017 was 20 percent. We are aiming to achieve a sales ratio of more than 50% for super green products and green products by FY2018.



Yaskawa's concept is to offer green products that provide excellent energy conversion rates to customers worldwide in its bid to realize a sustainable society.

Products which have been certified as a green product contain a logo for identification in brochures and Yaskawa websites.



Certification from three standpoints



18 Series certified as Super Green Products\*

4 Series certified as Green Products\*

\* Number of certifications up to FY2017

### Super Green Products Certified in FY2017

Product	Exterior	Product features and points of the environment friendliness
 Robot "MOTOMAN-GP series" and "MOTOMAN-AR series" MOTOMAN-GP7, GP8, GP25 MOTOMAN-AR700, AR900, AR1730		<ul style="list-style-type: none"> <li>- Fastest load capacity in class</li> <li>- Slimmer and boosted energy conservation</li> <li>- Reduced wiring</li> </ul>
 Robot controller YRC1000		<ul style="list-style-type: none"> <li>- An energy-saving feature through power regeneration</li> <li>- The smallest size in the world</li> </ul>
 Robot MOTOMAN-HC10DT		<ul style="list-style-type: none"> <li>- Works in collaboration with people in a safe manner</li> <li>- An energy-saving standby feature</li> <li>- Reduced wiring</li> </ul>
 Robot MotoMINI		<ul style="list-style-type: none"> <li>- Small enough to be carried around in a suitcase</li> <li>- Slimmer and boosted energy conservation</li> <li>- The smallest industrial robot in the world</li> </ul>
 Robot controller YRC1000micro		<ul style="list-style-type: none"> <li>- Small enough to be set up on a 19-inch rack</li> <li>- An energy-saving standby feature</li> </ul>
 "Σ-7 series" AC Servo drive (Compatible with absolute encoders without batteries)		<ul style="list-style-type: none"> <li>- Saving resources without batteries</li> <li>- Maintenance-free and no batteries are used</li> </ul>

# Green Process Initiatives

## Environmental Management

Our company applies and expands environmental management to the entire Yaskawa Group.

We are aiming for companies that share our environmental policy and manage data on environmental burdens and make efforts to achieve the medium-term environmental objective for the Group versus environmental impact on the Group as a whole to exceed 80 percent in FY2018.

### Mid-Term Environmental Objectives (compared with FY2015)

- GHG emissions: 3% reduction by FY2018
- Waste emissions per units of sales: 3% improvement by FY2018

Our head office staff pay direct visits to group companies to assess the status and conduct audits, which includes auditing frameworks for environmental compliance.

We will continue our activities so that 100 percent coverage will be possible by 2025.



Scene from an audit at a Group company in China

## Proper Management of Chemical Substances

To deal with chemical substances contained in products, restrictions for which are spreading on a global scale, Yaskawa in FY2017 introduced "chemSHERPA" as a tool in response to a green procurement study and held a supplier briefing for approximately 600 companies.

Yaskawa leverages the scheme to share information on chemical substances according to IEC62474 of the International Electrotechnical Commission, complying with environmental ordinances in a comprehensive manner, and promotes product design and procurement with considerations for the environment.



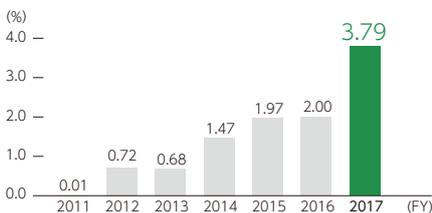
Briefing held for suppliers

## Mitigation of Climate Change

The Yaskawa Group promotes the conservation of energy and the use of clean energy in its corporate activities and is aiming to boost the ratio of renewable energy in its use of electric power.

With the exception of development bases, Yaskawa completed its introduction of photovoltaic generation facilities at all of its offices by FY2017, making the ratio of renewable energy approximately 3.8 percent. It will continue to invest in the conservation and creation of energy in a systematic way and further its efforts to achieve its long-term objectives.

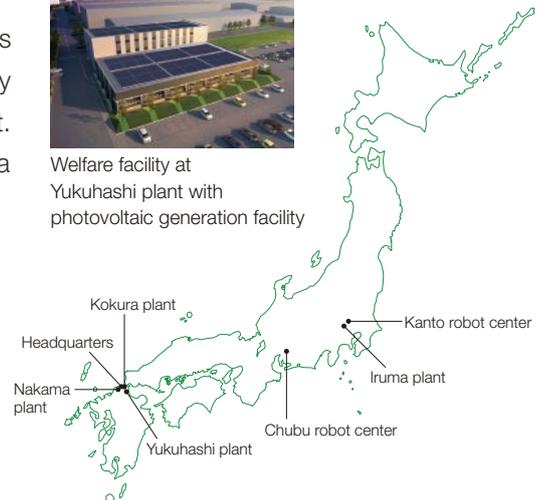
### Ratio of Renewable Energy Comprising Power Consumption



### Office Where Solar Power Energy Generation Equipment is Set Up



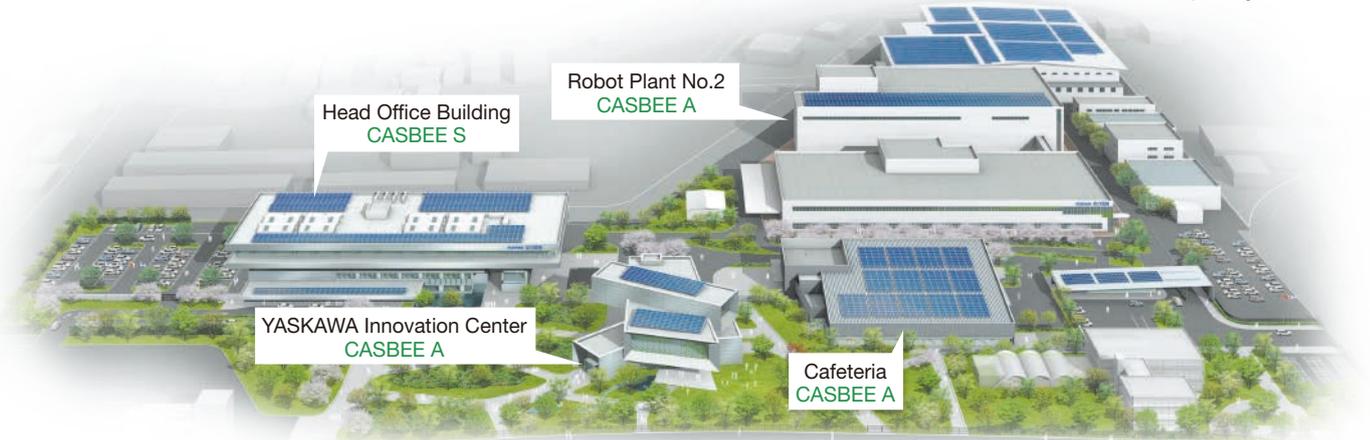
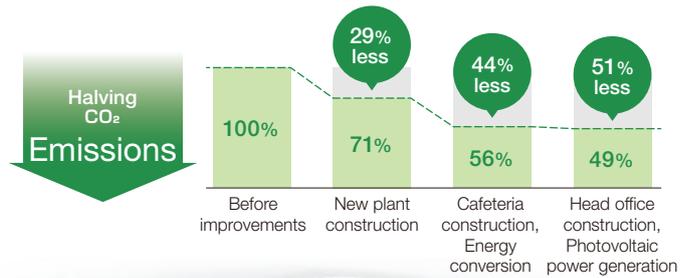
Welfare facility at Yukuhashi plant with photovoltaic generation facility



# Eco-Conscious Initiatives at the Robot Village

Five eco-conscious perspectives have been incorporated in the Robot Village to realize halving of CO<sub>2</sub> emissions and 35% reduction of peak power consumption.

The five eco-conscious perspectives and their representative examples are introduced here.



\*: CASBEE refers to the Comprehensive Assessment System for Built Environment Efficiency, which is a method of evaluating the environmental performance of a building and ranking it in five stages. (S: excellent, A: very good, B+: good, B-: slightly poor, C: poor)

## Create Creating Energy



Creating electric power by photovoltaic power generation  
Panel capacity: 574 kW, equivalent to 367 households  
Making comfortable, energy-saving workplaces free of waste, excess, and irregularity  
Head Office Building: CASBEE\* "S"  
Plant No. 2, Welfare Building, and YASKAWA Innovation Center: CASBEE\* "A"

## Store Storing Energy



Peak shifting 100 kWh of power by storage battery  
Reuse rainwater for toilets to save water  
Tank capacity 345 kℓ,  
Equivalent to 12 days of consumption at the head office building

## Recover Recovering Energy



Utilization of waste heat for hot water supplying  
Recovering the power that was thrown away  
Recovery of regenerative power  
Recovering waste heat energy  
Cogeneration 35 kW

## Reduce Reducing Energy Consumption



Reducing facility power consumption by using AC drive  
Incorporation of AC drives in fans and pumps  
Reduce energy consumption through building schemes

Energy saving by AC drive  
Appropriate speed  
Fixed rotation speed  
AC drive control (appropriate rotation speed)

## Smart use Using Energy Smartly

### Functions of the Energy Management System

Automatic Control of Air Conditioning  
Demand 2,010kW, Generated output 280kW, Power usage rate 94%  
Air temperature 26°C, Humidity 51%, Solar radiation 300W/m<sup>2</sup>

574 kW photovoltaic power generation  
35kW cogeneration Cogeneration system generates electric power and heat at the same time.  
Electric power company  
100kW storage battery  
AM8:00 Electric power forecast! Warning!  
Notify the timing for saving electricity by e-mail

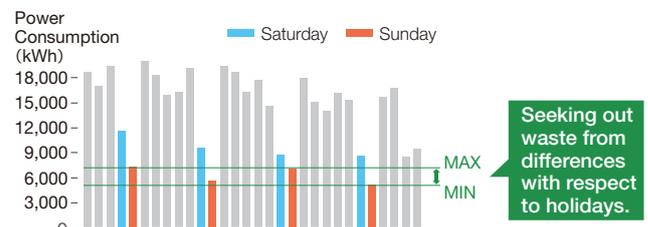
### The Roles of the System

- [1] To give energy saving timing notices
- [2] To give natural ventilation timing notices
- [3] Peak shaving 480 kW of power by automatic control of air conditioning and storage battery
- [4] Finding energy waste and feeding back to energy saving tuning



Display screen of energy use in major operational bases in Japan

### Power Consumption of the Robot Village



# Corporate Governance

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11

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1

## Directors (Non-Member of the Audit and Supervisory Committee)

1 Representative Director  
Chairman of the Board

**Junji Tsuda**

March 1976 Joined the Company  
June 2005 Director  
June 2009 Director, Managing Executive Officer  
March 2010 Representative Director, President  
June 2013 Representative Director, Chairman of the Board and President  
March 2016 Representative Director, Chairman of the Board (incumbent)

2 Representative Director  
President

**Hiroshi Ogasawara**

March 1979 Joined the Company  
June 2006 Director  
June 2013 Director, Managing Executive Officer  
March 2015 Representative Director, Senior Managing Executive Officer  
March 2016 Representative Director, President (incumbent)

3 Representative Director  
Senior Managing Executive Officer

**Shuji Murakami**

March 1982 Joined the Company  
June 2008 Director  
March 2012 Director, Executive Officer  
March 2014 Director, Managing Executive Officer  
March 2016 Representative Director, Senior Managing Executive Officer (incumbent)

## Directors who are Members of the Audit and Supervisory Committee

7 Director  
Member of the Audit and Supervisory Committee

**Konosuke Noda**

8 Director  
Member of the Audit and Supervisory Committee

**Koichi Tsukahata**

9 Outside Director  
Member of the Audit and Supervisory Committee

**Yoshiki Akita**

## Executive Officer

Managing Executive Officer

**Hiroyuki Ougi**

Executive Officer

**Michihiko Zenke**

Executive Officer

**Masahiro Ogawa**

Executive Officer

**Takeshi Ikuyama**

Executive Officer

**Masanori Imafuku**

Executive Officer

**Akira Kumagae**



2

4

6

8

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12

**4** Director  
Managing Executive Officer  
**Yoshikatsu Minami**  
December 1983 Joined the Company  
June 2008 Director  
June 2012 Executive Officer  
June 2015 Director, Managing Executive Officer (incumbent)

**5** Director  
Managing Executive Officer  
**Koichi Takamiya**  
March 1983 Joined the Company  
June 2010 Director  
June 2012 Executive Officer  
March 2016 Managing Executive Officer  
June 2016 Director, Managing Executive Officer (incumbent)

**6** Director  
Executive Officer  
**Yuji Nakayama**  
March 1983 Joined the Company  
June 2010 Director  
June 2012 Executive Officer  
June 2013 Director, Executive Officer (incumbent)

**10** Outside Director  
Member of the Audit and Supervisory Committee  
**Kazumasa Tatsumi**

**11** Outside Director  
Member of the Audit and Supervisory Committee  
**Junichi Sakane**

**12** Outside Director  
Member of the Audit and Supervisory Committee  
**Junko Sasaki**

Executive Officer  
**Manfred Stern**

Executive Officer  
**Michael Stephen Knapek**

Executive Officer  
**Yasuhiko Morikawa**

Executive Officer  
**Junichi Nakano**

Executive Officer  
**Nobuaki Jinnouchi**

# Corporate Governance

Corporate governance is promoted for the realization of management principles and enhancement of corporate value.

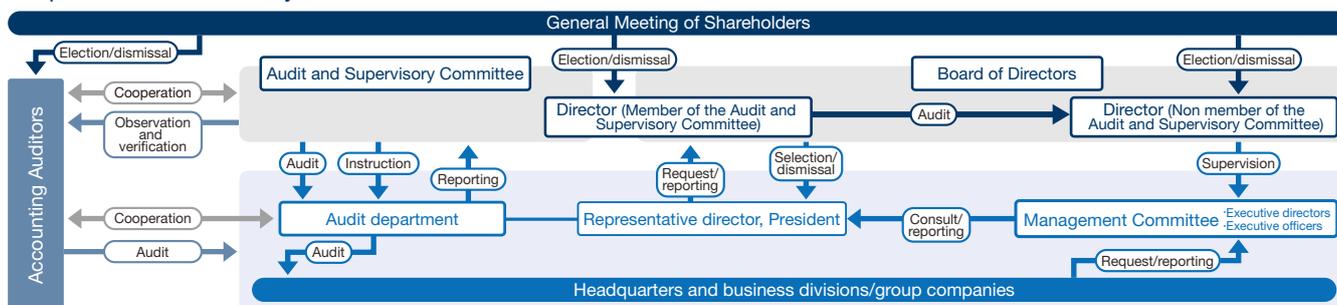
## Corporate Governance System

To further strengthen corporate governance and the supervisory functions of the Board of Directors with respect to the management and improve soundness and efficiency of management, Yaskawa has in place a system with the Audit and Supervisory Committee. Supervising function is working by leveraging the functions of Audit and Supervisory Committee, for example the fact that members of the Committee are able to exercise their voting rights as directors at board of directors' meetings on important matters within the company such as the election and dismissal of the representative

directors, to validate results on the execution of business by executive directors and to state their opinions on representative directors' election, dismissal, or remuneration at shareholder meetings. The Company has also adopted an executive officer system in order to enhance the speed at which business is performed.

In order to further strengthen governance, Corporate Governance Promotion Office was established under Human Resources & General Affairs Div. as a dedicated department for corporate governance.

### Corporate Governance System



### Board of Directors

Yaskawa's Board of Directors consists of a total of 12 directors with eight internal directors and four outside directors.

The Board of Directors makes decisions on important matters related to business and matters required by laws and regulations as well as directs the continuous monitoring of the execution of business.

We have appointed Yoshiaki Akita, Kazumasa Tatsumi, Junichi Sakane, and newly appointed Junko Sasaki in 2018 as outside directors, and expect them observe the company from the standpoint of investors, customers and the general public. During deliberations at the meetings of the Board of Directors, outside directors after having fully grasped the current circumstances of the company based on information that is addressed or reported by internal control divisions, internal audit divisions, head office divisions and the Accounting Auditor, provide recommendations, etc., using their respective knowledge, thus serving as an appropriate supervisory function. During FY2017 with the change in accounting period, 11 Board of Directors meetings were held and attendance rate for outside directors was 100%.

### Audit and Supervisory Committee

The Audit and Supervisory Committee is comprised of six directors (four of whom are outside directors) who are members of the Audit and Supervisory Committee.

The Audit and Supervisory Committee performs audits based on sufficient information reported from internal control divisions, internal audit divisions, and head office divisions, and examinations conducted by the internal directors. Further, duties are performed in collaboration with ERNST & YOUNG SHINNIHON LLC, the Accounting Auditor the Company has selected. The duties of the Accounting Auditor are monitored and verified from an independent standpoint. During FY2017, 13 Audit and Supervisory Committee meetings were held and attendance rate for outside directors who are the members of Audit and Supervisory Committee was 100%.

### Management Committee

The Yaskawa Electric's Management Committee is comprised of executive directors, executive officers, etc., who deliberate on important decision-making matters regarding the execution of business operations. The Management Committee is held once a month in principle and extraordinarily as needed in the formation of a flexible and agile business execution system.

## Committee Structure for Enhancement of Monitoring Function of the Board of Directors

### Nomination Advisory Committee

The nomination advisory committee, an advisory body to the president, is in place for the purpose of securing transparency and fairness for the designation of candidate directors and the selection process for representative directors as well as titled officers, and for the purpose of securing means for outside directors, who are member of Audit and Supervisory Committee, to discuss matters based on ample information necessary for developing opinions, on agenda items such as the designation of officers. When proposals are being presented to the board of directors' meeting concerning such matters as the designation of officers, we report the proposal to the pertaining committee to fully reflect its opinions to the discussion.

### Remuneration Advisory Committee

For remuneration of directors (excluding those who are members of the Audit and Supervisory Committee) and executive officers, we have established a Remuneration Advisory Committee that serves as an advisory body for the president for the purpose of ensuring justification and transparency, and to ensure that outside directors who are members of the Audit and Supervisory Committee are given sufficient information to form opinions about the remuneration for discussion. The committee discusses remuneration for executives based on calculations made through regulations, etc., for officer remuneration in response to inquiries from the president and other matters pertaining to officer remuneration from the standpoint of justification and answers to the president.

### Structures for the Board of Directors, the Audit and Supervisory Committee, and Advisory Committees

Name	Position	Duty	Board of Directors	Audit and Supervisory Committee	Nomination Advisory Committee	Remuneration Advisory Committee
<b>Junji Tsuda</b>	Representative Director, Chairman of the Board		◎			
<b>Hiroshi Ogasawara</b>	Representative Director, President	In charge of human resources development; Manager, ICT Strategy Promotion Div.	○		◎	
<b>Shuji Murakami</b>	Representative Director, Senior Managing Executive Officer	In charge of CSR & compliance; In charge of administration; General Manager, Corporate Planning Div.	○			○
<b>Yoshikatsu Minami</b>	Director, Managing Executive Officer	General Manager, Production Management & Operations Div.; General Manager, Export Administration Div.	○			
<b>Koichi Takamiya</b>	Director, Managing Executive Officer	General Manager, Corporate Sales & Marketing Div.	○			
<b>Yuji Nakayama</b>	Director, Executive Officer	General Manager, Human Resources & General Affairs Div.	○			○
<b>Konosuke Noda</b>	Director and Member of the Audit and Supervisory Committee		○	◎		
<b>Koichi Tsukahata</b>	Director and Member of the Audit and Supervisory Committee		○	○		
<b>Yoshiki Akita</b>	Outside Director and Member of the Audit and Supervisory Committee		○	○	○	◎
<b>Kazumasa Tatsumi</b>	Outside Director and Member of the Audit and Supervisory Committee		○	○	○	○
<b>Junichi Sakane</b>	Outside Director and Member of the Audit and Supervisory Committee		○	○	○	○
<b>Junko Sasaki</b>	Outside Director and Member of the Audit and Supervisory Committee		○	○	○	○

◎Chairman ○Member

## Evaluation of the Effectiveness of the Board of Directors' Meetings

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By having all the directors become aware of and share the direction and issues that the meeting should aim for, we have been conducting "Questionnaire on Evaluation of Board of Directors' Meetings" (anonymous survey) once a year since 2016 for the purpose of realizing continuous improvements in corporate value. As a result, we determine that the board of directors' meetings have secured general effectiveness based on the points below:

- Initiatives for separating the business execution function from the supervisory function are underway, as result of establishment of Audit and Supervisory Committee.
- Several independent outside directors have been selected

to comprise the board of directors' meetings and an appropriate structure is established, both in terms of size and composition.

- An environment where independent outside directors feel free to make their opinions is facilitated at the board of directors' meetings.

This questionnaire has also enabled us to acknowledge various issues, such that we need to further discuss things from a medium- to long-term perspective, to further improve our effectiveness. We will bear this point in mind and take steps to further improve our effectiveness (Please also refer to Page 59 for details).

## Remuneration Policy

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The annual compensation limit for directors (excluding director members of the Audit and Supervisory Committee) is the total (excluding employee wages) of (a) the fixed annual amount and (b) the profit-linked amount.

### (a) Up to 430 million yen per annum

On our directors (except for outside directors), as they are responsible for improving corporate value, a certain amount will be paid in accordance with their performance appraisals and titles. As for outside directors, as they are responsible for supervising the execution of duties, they will be paid a fixed sum as determined in advance.

### (b) Less than 1.0% of consolidated net profit for the business year prior to election or reappointment at shareholders' meeting

In order to make clearer the association with consolidated performance, directors will receive remuneration at less than 1.0% of consolidated net profit for the previous business year, which will not be paid to outside directors.

In addition to the above, in FY2017, we introduced a stock-based compensation plan for directors and executive officers as strengthened incentive for achieving its long-term business plan "Vision 2025". This has enhanced the clarity of the association among remuneration paid to directors, etc., our company performance and stock prices. It also allows our directors, etc., to share with stockholders not only the advantages brought about by rises in stock prices but also even the risks of falling share prices, and is intended to raise awareness of medium- to long-term improvements in performance and of contributions in increasing corporate value.

Also, in addition to the conventional function of Audit and Supervisory Committee to oversee the execution of business, in order to make the achievement of our mid-term business plan and other business plans a more definite reality, we have introduced a stock-based compensation plan for members of Audit and Supervisory Committee in FY2017, considering that they are responsible for monitoring the execution of management. Furthermore, to eliminate impact on the supervising function over the execution of business, the number of stocks delivered to Audit and Supervisory Committee members under this plan does not change in parallel with company's performance.

## Policy Pertaining to Cross-Held Shares

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Our company holds cross-held shares for the purpose of strengthening ties or alliances with partner companies.

As for individual cross-held shares, we make a regular review of our business strategy, business ties with our partners, and other such items from a medium- to long-term standpoint each year, as an agenda item for monitoring by the board of directors' meeting, and deliberate continued

holdings as well as the number of stocks which are held.

Also, we exercise voting rights for cross-held shares after checking the necessity against the holding purposes, considering whether they contribute to improvements in our corporate value. Furthermore, we will hold dialogue with the issuing companies on the details of them as necessary.

## Internal Control System

We recognize the importance of corporate ethics based on compliance with laws and regulations, etc., and consider the increasing of shareholder value through expediting of managerial decision making in accordance with changing social and economic environments and improvement of soundness of management to be an important theme. Establishing and managing the internal control system is one of the important and indispensable measures to realize this issue, and we assume that the establishment and maintenance

of this system is necessary based on this idea. The Company is working on strengthening the internal control system to promote appropriateness of group-wide corporate actions in the context of improvement in the efficiency of execution of operations, compliance, management of the risk of loss, securing the reliability of financial reports, management of subsidiaries, internal audits and management of the Audit and Supervisory Committee, etc.

## Risk Management System

In developing its risk management system, the Company is promoting company-wide adherence and enlightenment of the "Yaskawa Group Code of Conduct". As for the strengthening of compliance structure, it has established Compliance Committee for the purpose of group-wide deployment and promotion. It has also established Risk Management Committee for the purpose of drafting and promoting policies pertaining to risk management, following up on the risk management structure, and offering enlightenment on people's awareness. "Basic Regulations for Risk Management" clearly set out the basic policies for day-to-day preparedness and emergencies of a risk incident.

It also consults with and receives advice from the company attorney when legal decisions are needed.

### Measures Against Disaster Risks

Probability for an earthquake of magnitude of approximately 7.2 within 30 years to occur at Fukuchiyama fault belt, which is near the Kitakyushu city, where Yaskawa Electric headquarters are located is estimated to be 0~3% by headquarters for Earthquake Research Promotion. The head office building is designed to secure the functions needed for the minimum activities in the event of an earthquake with a seismic intensity of 6 upper.



The Head Office Building

## Compliance System

Based on the "Basic Regulations for Group Compliance" we are engaged in structuring a system for promoting compliance and implementing compliance measures, as well as providing compliance training according to job rank.

In FY2017, we provided employee training on the background of tightening regulations related to protection of personal information, and posted statement approved by the Board of Directors as required in the UK Modern Slavery Act 2015 on our corporate website. Also, we translated "Yaskawa Group Code of Conduct" into 18 languages and distributed to the employees in each country, at the same time provided compliance training for employees at subsidiaries in the Asian region.

### Enhancement of Compliance Measures Overseas

At Yaskawa Group, on the background that the importance of our overseas business activities is increasing, we implement such measures as the establishment of global whistle-blowing system and compliance training at overseas subsidiaries in order to penetrate the awareness for compliance in the group companies abroad.



Posters to publicize whistle-blowing system



Compliance training at an overseas subsidiary

## Interview with Junji Tsuda, Chairman of the Board, and Yoshiki Akita, Outside Director

We intend to further increase our corporate value by enhancing capabilities to create innovation through aggressive management, sticking to be the best in the world.



Junji Tsuda

Representative Director,  
Chairman of the Board

Yoshiki Akita

Outside Director and  
Member of the Audit and  
Supervisory Committee

- First of all, let us look back on what was talked in the interview two years ago in "YASKAWA Report 2016." The interview covered the establishment of the Audit and Supervisory Committee and the Nomination Advisory Committee as well as the introduction of an executive officer system, and explained the backdrop how the corporate governance structure had been strengthened at Yaskawa Electric. While Yaskawa has facilitated its defensive governance through these initiatives for strengthening its

structure, challenges were also raised, such as how the company would look at governance to conduct more aggressive business and how it can become an organization that can generate new innovation. Two years have passed since the previous talk. How do you feel Yaskawa Electric has changed during this period?

Akita: During these past two years, Yaskawa Electric has precisely captured business opportunities, boosted its per-

formance, and achieved its operating profit target in the Dash 25 mid-term business plan (FY2016-2018), a year earlier than scheduled. As a result, I feel that we have generated a lot of expectation for growth from the stock market, and Yaskawa has grown to be a company with market capitalization that exceeds a trillion yen. I feel that there is extremely great meaning to this growth. Amid such conditions, an environment has been facilitated in the board of directors' meetings so that outside directors are able to proactively state opinions for improving corporate value. I am also seeing the changes that the functionality and effectiveness of the meetings has steadily improved as the information needed for our discussions is fully prepared, and that we're having more specific, more constructive and deeper discussions. Also from the financial perspective, I think the improvement in our cash flow has enabled us to enter a new stage where we will be thinking about how to spend our money while considering an optimal capital structure.

**Tsuda:** Mr. Akita had extended efforts for us since the time prior to our establishment of the Audit and Supervisory Committee in June 2015 and I feel that our board of directors' meetings has been able to change from a venue for obtaining approvals to a venue for further deepening discussions. We have also achieved performance levels that we have never before achieved in the past, and I feel that we have become able to hold vigorous discussions on an optimal capital structure aimed at maximizing our corporate value. I feel that we are also deepening our discussions on the ways for Yaskawa's contribution to our various stakeholders.

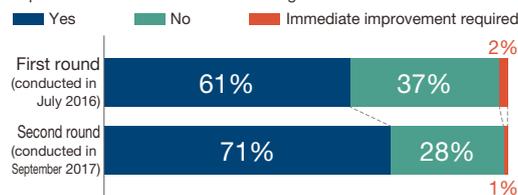
- Amid a social trend that for a company to achieve sustainable growth, improvements in the functionality of board of directors' meetings are indispensable, attention is turning toward the status of evaluating board of directors' meetings. With such a backdrop, Yaskawa Electric conducted a questionnaire on the evaluation of the board of directors' meetings for all directors, including audit and supervisory committee members, twice—in July 2016 and in September 2017.

**Akita:** As indicated by the questionnaire results, the effectiveness of the board of directors' meetings has generally been



#### Questionnaire on Evaluation of Board of Directors' Meetings

Are the following 28 items being properly addressed respectively to improve the effectiveness of the meetings?



Subjects: All directors, including members of the Audit and Supervisory Committee  
Number of questions: 28

secured, and I feel that we're on a trend for improvement. For example, I think we're obtaining materials beforehand so we can better understand the background of the items that are presented in our agenda, and the environment is becoming such that questions on the details can be checked in advance. In these ways, we are now able to reach resolutions with ample discussion, even within the limited amount of time that we have. I think these are the types of improvements that we have been building, which have been shown in these results.

**Tsuda:** While I regret that the burden is being increased on our outside directors by providing them with information ahead of time, I am also seeing the change that they came to be able to monitor the status of our business execution from a different perspective. While there is some insufficiency in our provision of data analysis and availability, a key to delve into the essence of our discussions, I feel that the quality of our materials is steadily improving.

- The questionnaire also brought to light some challenges such as an inadequacy of progress reports and results analysis of our mid-term business plan and others, cases where the whereabouts of the risks weren't clear, and the reports on results of approved items not being sufficient.

**Tsuda:** As one specific challenge, I feel that there are times when we do not have clear, quantitative explanations in our progress reports on business targets. For example, while it's necessary to quantitatively and correctly understand our state of business in our analysis of unachieved business ob-

jectives and results analysis for the steps that we take, it's true that there are some parts which are vague. While this is not something that can be resolved overnight, I think it's important to make up for what isn't enough as we proceed to hold discussions.

**- We obtained questionnaire results both on this occasion and on the previous occasion that an environment has been facilitated where independent outside directors can speak freely at the board of directors' meetings.**

**Akita:** I feel that compared to the time when I assumed my role as an outside director, the environment has been facilitated so we can speak freely at the board of directors' meetings and the atmosphere has changed a great deal. While the quality of the information that is provided in advance has also been improved, and I attend the meetings after taking full measure of the details, I make it a rule not to pretend to know all the answers and to ask questions seeking explanations if there is something that I don't understand. Although there are some questions for which I can't immediately receive answers, I think it's possible for Yaskawa Electric to become aware of new things by having those questions posed. I think that asking these types of direct questions adds a good sense of tension to the board of directors' meetings.

**- Ms. Junko Sasaki was newly appointed in the 102nd regular shareholders' meeting held in May 2018, making the number of independent outside directors four versus the three that there have been to date.**

**Tsuda:** While the effectiveness of the board of directors' meetings is secured through measures like the establishment of the Audit and Supervisory Committee, we have welcomed Ms. Sasaki as a new addition to our outside directors in order to deepen discussions on our business plans and strategies from a more diverse perspective. In addition to the experience and expertise that she has nurtured at global IT companies to date, we look forward to more vigorous activities in our meetings by having her.

## Yoshiki Akita

Sep. 1984 – Registered as a Certified Public Accountant  
Jun. 1995 – Assumes position of representative director at Asahi Arthur Andersen, Ltd.  
Mar. 2006 – Assumes position of outside director at Bell-Park, Co., Ltd. (incumbent)  
Sep. 2007 – Assumes position of representative director and chairman and executive director at Layers Consulting Co., Ltd. (incumbent)  
Jun. 2012 – Assumes position of outside director at Yaskawa Electric Corp.  
Jun. 2015 – Becomes an outside director and member of the Audit and Supervisory Committee at Yaskawa Electric Corp. (incumbent)

**- So, corporate governance at Yaskawa Electric seems to be in the process of advancement. How do you see its direction in looking toward sustainable growth?**

**Akita:** To become a true global company in both name and substance, I think it needs to further advance its matrix management, not only for breakdowns by business division but also considering breakdowns by region. For example, when attempting to understand the state of business by region, I think reports should be received directly from American and European regions in their native language (such as English). For Yaskawa Electric to aim for new heights, I feel that it should conduct business by considering optimum capital structures with an awareness of efficient uses of funds, for example by creating innovation by proactively taking risks or to accelerate its deployments for new businesses.

**Tsuda:** My awareness is that one of the business challenges faced by our company is the facilitation of a succession plan (plans for developing our next president). As Mr. Akita says, in order for Yaskawa to become a true global company, there is a need to choose an individual who would be taking on the next generation from people with a diverse array of backgrounds and to develop them in a systematic manner. I feel that that would make it possible to create an agile organization that can more flexibly cope with changes in the business environment. On the other hand, I am also aware of the presence of the risk that our company could fall into a so-called innovator's dilemma when we think 30 or 50 years ahead. By that, I'm referring to the risk of being preoccupied by the desire to improve existing products, market requirements changing greatly after technologies are developed from new values, and the structure of the power within the industry being turned around completely. I feel that in order to avoid such a risk, we need to nurture a culture that enables people to come up with disruptive innovation\* that can turn around existing values within the company. Needless to say, we have to have sustainable growth in the time to come, and in addition, it's by spreading the areas for making challenges in these ways without fearing failure that I would like to aim to realize a new industrial automation revolution and conduct business sticking to be the best in the world.

\*An innovation model that refers to innovation that disrupts the order of an existing market which has been formed by established technologies and business models, and dramatically change the structure of an industry. Defined by the scholar Clayton M. Christensen at Harvard Business School.



# Financial and Corporate Information

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# Financial and Non-Financial Data

(Millions of yen)		(Fiscal year)	2008	2009	2010	2011	2012
Net sales			350,249	224,710	296,847	307,111	310,383
Operating income			20,806	-6,977	12,874	14,818	13,070
Operating income ratio			5.9%	-3.1%	4.3%	4.8%	4.2%
Ordinary income			20,024	-6,049	13,429	15,626	14,053
Ordinary income ratio			5.7%	-2.7%	4.5%	5.1%	4.5%
Profit attributable to owners of parent			6,892	-5,699	6,544	8,432	6,800
Profit ratio			2.0%	-2.5%	2.2%	2.7%	2.2%
Sales and Income by Business Segment	*1 Motion Control	Net sales	160,848	104,814	156,450	149,410	144,333
		Operating income	11,755	-3,169	8,980	5,824	3,248
		Operating income ratio	7.3%	-3.0%	5.7%	3.9%	2.3%
	Robotics	Net sales	114,124	57,084	83,843	101,065	110,223
		Operating income	3,200	-8,327	1,673	7,014	8,365
		Operating income ratio	2.8%	-14.6%	2.0%	6.9%	7.6%
	System Engineering	Net sales	46,768	41,498	34,349	35,520	37,263
		Operating income	4,637	5,476	2,061	1,917	1,504
		Operating income ratio	9.9%	13.2%	6.0%	5.4%	4.0%
Sales by Destination	Japan		169,086	116,197	144,754	143,019	143,456
	The Americas		43,943	29,351	38,779	43,985	51,113
	Europe		52,887	24,332	29,610	33,939	32,047
	Asia except China		82,830	53,900	82,749	85,276	81,308
	Other		1,503	930	955	890	2,456
	Overseas sales ratio		51.7%	48.3%	51.2%	53.4%	53.8%
Per Share Information (yen)	Earning - basic		27.38	-22.64	26.00	33.51	27.03
	Earning - diluted		-	-	-	-	25.65
	Dividends		13.0	3.0	6.0	10.0	10.0
Shareholders' equity			97,068	88,459	93,220	100,109	112,218
Shareholders' equity ratio			39.0%	36.6%	35.2%	35.9%	37.1%
ROE: Return on equity			7.0%	-6.1%	7.2%	8.7%	6.4%
Interest-bearing debt			32,894	42,235	41,439	58,612	54,684
Debt-to-equity ratio (times)			0.3	0.5	0.4	0.6	0.5
Inventories			54,705	46,200	58,066	63,800	64,325
Inventory turnover (months)			1.9	2.5	2.3	2.5	2.5
Capital expenditures			8,611	4,119	6,655	9,907	15,895
Depreciation and amortization			8,028	7,840	7,057	7,606	8,114
Research and development expenses			9,704	8,493	9,724	10,398	10,731
<b>Non-financial data</b>							
No. of employees (persons)			8,463	8,176	8,085	8,246	10,383
No. of employees rehired (persons)			106	164	199	239	246
No. of regular employees and temporary contracted workers aged 60 to 64							
People with disabilities employed (%)			1.62%	1.75%	1.85%	1.65%	2.15%
No. of non-Japanese employees in Japan (persons)			14	16	14	19	18
Regular employees and contract employees							
Use of parental leave program			3/100%	5/100%	2/100%	5/100%	5/83%
No. of females using the program/Use rate							
Parental leave program			2	1	1	4	1
No. of males using the program (persons)							
Average days of paid leave taken per year			12.44	8.69	12.30	12.81	12.44
(No. of days/person)							
CO <sub>2</sub> emissions from production and sales activities (t.CO <sub>2</sub> )			23,952	19,053	23,688	22,086* <sup>2</sup>	22,138* <sup>2</sup>

\*1: Revisions were made to the division of businesses segments starting FY2017. The PV inverter business, which was previously included in Motion Control, is included in System Engineering. Figures and profit ratios of each segment for FY2016 reflect this change. The change is not applied to figures and profit ratios for the period up until FY2015.

Starting FY2013, reportable segments changed to the following 3 segments: Motion Control, Robotics, and System Engineering. There have also been partial changes in the

2013	2014	2015	2016	2017	(Fiscal year)	(Millions of yen)
363,570	400,153	411,260	394,883	448,523	Net sales	
25,702	31,532	36,730	30,409	54,126	Operating income	
7.1%	7.9%	8.9%	7.7%	12.1%	Operating income ratio	
27,084	33,884	35,833	31,963	55,300	Ordinary income	
7.4%	8.5%	8.7%	8.1%	12.3%	Ordinary income ratio	
16,964	24,819	22,365	20,397	39,749	Profit attributable to owners of parent	
4.7%	6.2%	5.4%	5.2%	8.9%	Profit ratio	
162,346	188,116	187,548	172,025	212,095	Net sales	Motion Control
16,444	21,748	22,413	22,772	41,729	Operating income	
10.1%	11.6%	12.0%	13.2%	19.7%	Operating income ratio	
122,543	135,956	154,068	139,993	163,379	Net sales	Robotics
9,511	10,558	15,304	10,253	17,761	Operating income	
7.8%	7.8%	9.9%	7.3%	10.9%	Operating income ratio	
35,327	40,980	43,053	59,354	52,934	Net sales	System Engineering
-5	-768	-760	-591	-3,794	Operating income	
-0.0%	-1.9%	-1.8%	-1.0%	-7.2%	Operating income ratio	
150,101	144,249	135,495	134,205	133,898	Japan	Sales by Destination
58,481	72,616	85,088	74,691	83,078	The Americas	
42,499	46,921	52,011	50,736	60,879	Europe	
108,595	132,779	134,294	131,045	166,711	Asia except China	
3,892	3,590	4,370	4,205	3,957	Other	
58.7%	64.0%	67.1%	66.0%	70.1%	Overseas sales ratio	
67.42	98.45	84.71	76.60	149.35	Earning - basic	Per Share Information (yen)
63.98	93.60	84.11	-	-	Earning - diluted	
12.00	20.00	20.00	20.00	40.00	Dividends	
134,076	171,388	181,281	198,513	235,865	Shareholders' equity	
39.4%	44.1%	48.5%	51.2%	53.5%	Shareholders' equity ratio	
13.8%	16.3%	12.8%	10.7%	18.3%	ROE: Return on equity	
55,528	52,430	48,426	36,765	32,247	Interest-bearing debt	
0.4	0.3	0.3	0.2	0.1	Debt-to-equity ratio (times)	
78,364	85,469	77,594	79,886	100,051	Inventories	
2.6	2.6	2.3	2.4	2.7	Inventory turnover (months)	
16,980	36,369	16,758	14,904	19,684	Capital expenditures	
9,214	11,534	13,063	12,076	12,691	Depreciation and amortization	
14,033	15,317	16,819	17,979	19,072	Research and development expenses	
					Non-financial data	
11,463	11,356	11,450	11,810	12,449	No. of employees (persons)	
236	213	229	220	175	No. of employees rehired (persons) No. of regular employees and temporary contracted workers aged 60 to 64	
2.15%	2.04%	2.07%	2.20%	2.02%	People with disabilities employed (%)	
20	20	22	27	28	No. of non-Japanese employees in Japan (persons) Regular employees and contract employees	
7/100%	4/100%	4/100%	15/100%	17/100%	Use of parental leave program No. of females using the program/Use rate	
1	3	3	4	4	Parental leave program No. of males using the program (persons)	
12.49	12.48	14.49	14.71	13.42	Average days of paid leave taken per year (No. of days/person)	
22,770*2	20,737*2	20,811*2	22,791*2	22,308*2	CO <sub>2</sub> emissions from production and sales activities (t.CO <sub>2</sub> )	

division of businesses within these segments. Figures and profit ratios of each segment for the period up until FY2012 are based on figures before the change was implemented. The figures for former Information Technologies segment and Other segment are omitted.

\*2: Including sales bases from FY2011.

# Management's Discussion and Analysis of Financial Position and Results of Operations

## Analysis of Results of Operations

### Overview on Business Performance

The business performance of the Yaskawa Group in FY2017 (March 21, 2017 – February 28, 2018) was strong due to high demand on the back of sophistication and automation of production equipment in the global manufacturing industry especially in China. Motion control and Robotics sales grew significantly especially for the semiconductor and electronic component markets. As a result, record-high sales and profits were achieved as fiscal year results.

As a result, consolidated sales for FY2017 were 448,523 million JPY, and overseas sales ratio grew from 66% of the previous fiscal year to 70%. Operating income stood at 54,126 million JPY and operating income ratio rose from 7.7% of the previous fiscal year to 12.1%. Ordinary income was 55,300 million JPY, due to the increase in operating income. Profit attributable to owners of parent stood at 39,749 million JPY, and earnings per share was 149.35 JPY, which is an increase by 72.75 JPY.

The management environment for the Yaskawa Group in FY2017 was as follows.

#### Japan:

Our business for the semiconductor and electronic component markets was brisk on the back of strong smartphone and data center-related demand. Also, capital expenditures for the purpose of facility replacement, capacity expansion and higher efficiency increased in the manufacturing sector.

#### U.S.:

Automobile-related demand remained steady on the back of stable economic growth. We also saw recovery in demand for the oil&gas-related market, while semiconductor-related demand remained strong.

#### Europe:

Demand for capital expenditures especially in the automobile industry was robust.

#### China:

Sophistication and automation of production equipment accelerated in the manufacturing sector overall, especially in the smartphone-related market. Demand for infrastruc-

ture investment also remained strong.

#### Other Asian Countries:

Semiconductor-related investment for memory and OLED especially in Korea remained steady.

### Performance by Business Segment

The business of the Yaskawa Group is divided into four segments.

The performance of each business segment for FY2017 is as follows.

Starting FY2017, revisions were made to the division of businesses segments for the purpose of expanding clean power business. The PV inverter business, which was previously included in Motion Control, is included in System Engineering.

#### Motion Control

Motion Control segment is comprised of AC servo & controller business and drives business. Both sales and operating income set record highs as fiscal year results, as AC servo & controller business achieved high performance and demand recovered for the drives business.

##### <AC servo & controller business>

- Sales were strong mainly for the semiconductor and electronic component industries due to promotion of automation of production equipment and robust smartphone-related demand.
- Because of the growth in sales ratio of the core product Sigma-7 series and expansion of production in China, profitability significantly improved.

##### <Drives business>

- Sales and profitability grew on the back of recoveries in the U.S. oil&gas-related demand and infrastructure investment in China.

#### Robotics

Sales were strong on the back of growth in demand from overseas markets including China. Productivity improved significantly because production volume remained high-level and ratio of production in China expanded. As a result, sales and operating income set record highs as fiscal year results.

- Automobile-related sales for core products such as welding

and painting robots increased in overseas markets, especially in China and Europe.

- Sales for the general industries increased because of the strong demand for production automation in the manufacturing industry overall including smartphones and home electronics in China.

### System Engineering

Sales and operating loss worsened from the influence of change in accounting period.

- Steel plant and social system businesses progressed according to plan by capturing large-scale projects to meet

the need for facility renovation.

- As for the clean power business, sales related to large-scale wind turbines were steady. However, the sluggish PV inverter sales in Japan and the U.S. weighed on the segment profitability.

### Other

Other segment is comprised of IT-related business and logistics business. Structural reforms aimed at increasing management efficiency led to a slight improvement in profitability.

## Analysis of Financial Position

### Assets

Total assets at the end of FY2017 stood at 441,249 million JPY, which is an increase by 53,737 million JPY from the end of the previous fiscal year. This is due to the increase in current assets by 44,700 million JPY, which include notes and accounts receivable, and inventories, etc., as well as the increase in non-current assets by 9,037 million JPY, which include property, plant and equipment, and investments and other assets, etc.

### Liabilities

Total liabilities at the end of FY2017 stood at 202,623 million JPY, which is an increase by 15,809 million JPY from the end of the previous fiscal year. While non-current liabilities

decreased by 4,224 million JPY, which include decrease of long-term loans payable and net defined benefit liability, current liabilities increased by 20,034 million JPY from the previous fiscal year due to increase in notes and accounts payable, etc.

### Net Assets

Total net assets at the end of FY2017 stood at 238,626 million JPY, which is an increase by 37,927 million JPY from the end of the previous fiscal year. This is due to the increases in retained earnings by 31,752 million JPY, foreign currency translation adjustment by 2,834 million JPY, and valuation difference on available-for-sale securities by 2,334 million JPY.

## Analysis of Cash Flow Status

The status of cash flows in FY2017 is as follows. As a transition year for the change in accounting period, changes from the previous fiscal year are not shown.

### Cash Flows from Operating Activities

Net cash provided by operating activities for FY2017 stood at 46,054 million JPY due to increase in operating income although the working capital including notes and accounts receivable and inventory assets as well as income taxes paid increased.

### Cash Flows from Investing Activities

Net cash used in investing activities for FY2017 stood at

18,852 million JPY due to purchase of property, plant and equipment and intangible assets as well as purchase of investment in securities.

### Cash Flows from Financing Activities

Net cash used in financing activities stood at 14,820 million JPY due to scheduled repayments of long-term loans payable and cash dividends paid.

As a result of the above, cash and cash equivalents at end of period stood at 42,213 million JPY. (An increase by 12,478 million JPY from the end of previous fiscal year) Free cash flows, the sum of cash flows from operating and investing activities, were positive at 27,202 million JPY.

# Consolidated Financial Statements

## Consolidated Balance Sheets

YASKAWA Electric Corporation and Consolidated Subsidiaries  
February 28, 2018 and March 20, 2017

(Millions of yen)

Assets		FY2016	FY2017	Liabilities		FY2016	FY2017
Current assets	Cash and deposits	29,792	42,279	Current liabilities	Notes and accounts payable — trade	69,974	84,795
	Notes and accounts receivable — trade	129,365	142,039		Short-term loans payable	24,647	22,498
	Merchandise and finished goods	48,148	58,640		Accrued expenses	23,112	24,038
	Work in process	14,127	19,311		Income taxes payable	3,545	6,338
	Raw materials and supplies	17,611	22,100		Provision for directors' bonuses	66	59
	Deferred tax assets	9,228	9,369		Other	20,292	23,942
	Other	14,504	13,951	<b>Total current liabilities</b>	<b>141,638</b>	<b>161,673</b>	
	Allowance for doubtful accounts	-2,482	-2,695	Non-current liabilities	Long-term loans payable	11,145	8,977
	<b>Total current assets</b>	<b>260,295</b>	<b>304,995</b>		Provision for directors' retirement benefits	175	202
<b>Property, plant and equipment</b>			Provision for stocks payment		—	367	
Buildings and structures, net	32,202	32,067	Net defined benefit liability		28,019	25,917	
Machinery, equipment and vehicles, net	12,893	14,576	Other		5,834	5,484	
Land	8,819	8,650	<b>Total non-current liabilities</b>		<b>45,174</b>	<b>40,949</b>	
Construction in progress	1,734	6,974	<b>Total liabilities</b>	<b>186,813</b>	<b>202,623</b>		
Other, net	5,510	5,687	<b>Net assets</b>				
<b>Total property, plant and equipment</b>	<b>61,159</b>	<b>67,956</b>	Shareholders' equity	Capital stock	30,562	30,562	
<b>Intangible assets</b>				Capital surplus	27,704	27,717	
Goodwill	4,053	2,931		Retained earnings	132,607	164,360	
Software	9,541	9,457		Treasury shares	-249	-1,338	
Other	11,032	9,650		<b>Total shareholders' equity</b>	<b>190,624</b>	<b>221,301</b>	
<b>Total intangible assets</b>	<b>24,627</b>	<b>22,039</b>	Accumulated other comprehensive income	Valuation difference on available-for-sale securities	8,627	10,961	
<b>Investments and other assets</b>				Deferred gains or losses on hedges	101	13	
Investment securities	31,617	37,061		Foreign currency translation adjustment	1,292	4,126	
Net defined benefit asset	56	54		Remeasurements of defined benefit plans	-2,132	-538	
Deferred tax assets	6,576	5,840		<b>Total accumulated other comprehensive income</b>	<b>7,889</b>	<b>14,563</b>	
Other	3,629	3,680	Non-controlling interests	2,184	2,761		
Allowance for doubtful accounts	-449	-379	<b>Total net assets</b>	<b>200,698</b>	<b>238,626</b>		
<b>Total investments and other assets</b>	<b>41,429</b>	<b>46,258</b>	<b>Total liabilities and net assets</b>	<b>387,512</b>	<b>441,249</b>		
<b>Total non-current assets</b>	<b>127,217</b>	<b>136,254</b>					
<b>Total assets</b>	<b>387,512</b>	<b>441,249</b>					

## Consolidated Statements of Income and Comprehensive Income

YASKAWA Electric Corporation and Consolidated Subsidiaries  
Year ended February 28, 2018 and year ended March 20, 2017

Consolidated Statements of Income		(Millions of yen)	
		FY2016	FY2017
Net sales		394,883	448,523
Cost of sales		270,864	294,348
Gross profit		124,018	154,174
Selling, general and administrative expenses		93,609	100,048
Operating profit		30,409	54,126
Non-operating income	Interest income	203	237
	Dividend income	336	370
	Share of profit of entities accounted for using equity method	2,403	1,861
	Subsidy income	260	533
	Gain on bad debts recovered	—	347
	Other	197	300
	Total non-operating income	3,401	3,651
Non-operating expenses	Interest expenses	565	594
	Foreign exchange losses	958	1,625
	Other	323	257
	Total non-operating expenses	1,847	2,477
Ordinary profit		31,963	55,300
Extraordinary income	Gain on sales of non-current assets	48	335
	Gain on sales of investment securities	0	1,144
	Gain on sales of shares of subsidiaries and associates	63	—
	Gain on sales of investments in capital of subsidiaries and associates	—	0
	Gain on liquidation of subsidiaries and associates	—	7
	Gain on exchange from business combination	—	25
	Other	—	0
Total extraordinary income	111	1,513	

		(Millions of yen)	
		FY2016	FY2017
Extraordinary losses	Loss on sales and retirement of non-current assets	395	94
	Loss on valuation of investment securities	589	446
	Loss on valuation of shares of subsidiaries and associates	49	7
	Loss on sales of shares of subsidiaries and associates	373	20
	Loss on sale of investments in capital of subsidiaries and associates	37	—
	Impairment loss	718	2,677
	Other	0	11
Total extraordinary losses		2,165	3,257
Profit before income taxes		29,910	53,556
Income taxes — current		10,369	14,426
Income taxes — deferred		-1,260	-1,339
Total income taxes		9,109	13,087
Profit		20,800	40,469
Profit attributable to non-controlling interests		403	720
Profit attributable to owners of parent		20,397	39,749

Consolidated Statements of Comprehensive Income		(Millions of yen)	
		FY2016	FY2017
Profit		20,800	40,469
Other comprehensive income	Valuation difference on available-for-sale securities	2,632	2,251
	Deferred gains or losses on hedges	96	-83
	Foreign currency translation adjustment	-2,786	2,587
	Remeasurements of defined benefit plans, net of tax	2,146	1,397
	Share of other comprehensive income of entities accounted for using equity method	-318	599
	Total other comprehensive income	1,770	6,753
	Comprehensive income		22,571
Comprehensive income attributable to owners of parent		22,283	46,423
Comprehensive income attributable to non-controlling interests		287	798

# Consolidated Statements of Changes in Net Assets

YASKAWA Electric Corporation and Consolidated Subsidiaries  
Year ended February 28, 2018 and year ended March 20, 2017

		(Millions of yen)				(Millions of yen)	
		FY2016	FY2017			FY2016	FY2017
<b>Shareholders' equity</b>				<b>Accumulated other comprehensive income</b>			
Capital stock	Balance at beginning of current period	30,562	30,562	Valuation difference on available-for-sale securities	Balance at beginning of current period	6,020	8,627
	Changes of items during period				Changes of items during period		
	Total changes of items during period	-	-		Net changes of items other than shareholders' equity	2,606	2,334
	Balance at end of current period	30,562	30,562		Total changes of items during period	2,606	2,334
Capital surplus	Balance at beginning of current period	27,705	27,704		Balance at end of current period	8,627	10,961
	Changes of items during period			Deferred gains or losses on hedges	Changes of items during period		
	Disposal of treasury shares	0	12		Balance at beginning of current period	8	101
	Change in ownership interest of parent due to transactions with non-controlling interests	-0	-		Changes of items during period		
	Total changes of items during period	-0	12		Net changes of items other than shareholders' equity	93	-88
Balance at end of current period	27,704	27,717	Total changes of items during period		93	-88	
Retained earnings	Balance at beginning of current period	117,268	132,607	Foreign currency translation adjustment	Balance at beginning of current period	4,104	1,292
	Changes of items during period				Changes of items during period		
	Dividends of surplus	-5,331	-7,997		Net changes of items other than shareholders' equity	-2,812	2,834
	Profit attributable to owners of parent	20,397	39,749		Total changes of items during period	-2,812	2,834
	Change of scope of consolidation	273	-		Balance at end of current period	1,292	4,126
	Total changes of items during period	15,339	31,752		Remeasurements of defined benefit plans	Changes of items during period	
Balance at end of current period	132,607	164,360	Balance at beginning of current period	-4,141		-2,132	
			Net changes of items other than shareholders' equity	2,008		1,594	
Treasury shares	Balance at beginning of current period	-246	-249	Total changes of items during period	2,008	1,594	
	Changes of items during period			Balance at end of current period	-2,132	-538	
	Purchase of treasury shares	-2	-1,094	Total accumulated other comprehensive income	Changes of items during period		
	Disposal of treasury shares	0	5		Balance at beginning of current period	5,992	7,889
Total changes of items during period	-2	-1,088	Changes of items during period				
Balance at end of current period	-249	-1,338	Net changes of items other than shareholders' equity		1,896	6,674	
Total shareholders' equity	Balance at beginning of current period	175,288	190,624	Total changes of items during period	1,896	6,674	
	Changes of items during period			Balance at end of current period	7,889	14,563	
	Dividends of surplus	-5,331	-7,997	<b>Non-controlling interests</b>			
	Profit attributable to owners of parent	20,397	39,749	Balance at beginning of current period	2,620	2,184	
	Purchase of treasury shares	-2	-1,094	Changes of items during period			
	Disposal of treasury shares	0	18	Net changes of items other than shareholders' equity	-435	576	
	Change in ownership interest of parent due to transactions with non-controlling interests	-0	-	Total changes of items during period	-435	576	
	Change of scope of consolidation	273	-	Balance at end of current period	2,184	2,761	
	Total changes of items during period	15,336	30,676	<b>Total net assets</b>			
Balance at end of current period	190,624	221,301	Balance at beginning of current period	183,901	200,698		
			Changes of items during period				
			Dividends of surplus	-5,331	-7,997		
			Profit attributable to owners of parent	20,397	39,749		
			Purchase of treasury shares	-2	-1,094		
			Disposal of treasury shares	0	18		
			Change in ownership interest of parent due to transactions with non-controlling interests	-0	-		
			Change of scope of consolidation	273	-		
			Net changes of items other than shareholders' equity	1,461	7,251		
			Total changes of items during period	16,797	37,927		
			Balance at end of current period	200,698	238,626		

# Consolidated Statements of Cash Flows

YASKAWA Electric Corporation and Consolidated Subsidiaries  
Year ended February 28, 2018 and year ended March 20, 2017

		(Millions of yen)				(Millions of yen)		
		FY2016	FY2017			FY2016	FY2017	
Cash flows from operating activities	Profit before income taxes	29,910	53,556	Cash flows from investing activities	Purchase of property, plant and equipment and intangible assets	-15,154	-17,751	
	Depreciation	12,076	12,691		Proceeds from sales of property, plant and equipment and intangible assets	92	423	
	Impairment loss	718	2,677		Purchase of investment in securities	-3,633	-2,808	
	Amortization of goodwill	1,171	1,106		Proceeds from sales and redemption of investment securities	363	1,367	
	Increase in allowance for doubtful accounts	138	51		Purchase of shares of subsidiaries resulting in change in scope of consolidation	-151	-	
	Decrease in net defined benefit liability	-1,425	-197		Proceeds from sales of shares of subsidiaries resulting in change in scope of consolidation	111	371	
	Increase/decrease(-) in provision for directors' retirement benefits	-17	27		Other, net	-563	-455	
	Increase/decrease(-) in provision for directors' bonuses	7	-6		<b>Net cash used in investing activities</b>	<b>-18,936</b>	<b>-18,852</b>	
	Increase in Provision for stocks payment	-	367		Cash flows from financing activities	Net decrease in short-term loans payable	-6,707	-4,418
	Loss/gain(-) on sales and retirement of non-current assets	347	-241			Proceeds from long-term loans payable	2,371	5,320
	Gain on sales of investment securities	-0	-1,144	Repayments of long-term loans payable		-6,258	-6,224	
	Loss on sales of shares of subsidiaries and associates	310	20	Purchase of treasury shares		-1	-1,040	
	Loss/gain(-) on sales of investment in capital of subsidiaries and associates	37	-0	Cash dividends paid		-5,331	-7,997	
	Loss on valuation of investment securities	589	446	Dividends paid to non-controlling interests		-242	-232	
	Loss on valuation of shares of subsidiaries and associates	49	7	Payments from changes in ownership interests in subsidiaries that do not result in change in scope of consolidation		-117	-	
	Interest and dividend income	-540	-608	Other, net		-166	-227	
	Interest expenses	565	594	<b>Net cash used in financing activities</b>		<b>-16,453</b>	<b>-14,820</b>	
	Increase in notes and accounts receivable — trade	-10,154	-5,385	Effect of exchange rate change on cash and cash equivalents		-561	96	
	Increase in inventories	-3,324	-19,080	<b>Net increase/decrease(-) in cash and cash equivalents</b>	<b>-2,198</b>	<b>12,478</b>		
	Increase in notes and accounts payable — trade	7,835	13,573	Cash and cash equivalents at beginning of period	31,656	29,735		
Increase/decrease(-) in accounts payable — other	-933	71	Increase in cash and cash equivalents from newly consolidated subsidiary	277	-			
Increase in consumption taxes refund receivable	-63	-1,758	<b>Cash and cash equivalents at end of period</b>	<b>29,735</b>	<b>42,213</b>			
Other, net	3,177	-404						
<b>Subtotal</b>	<b>40,475</b>	<b>56,366</b>						
Interest and dividend income received	1,537	2,306						
Interest expenses paid	-575	-590						
Income taxes paid	-7,684	-12,027						
<b>Net cash provided by operating activities</b>	<b>33,752</b>	<b>46,054</b>						

Vision

Financial Capital

Manufactured Capital

Intellectual Capital

Human Capital

Social and Relationship Capital

Natural Capital

Corporate Governance

Financial and Corporate Information

Corporate Name	YASKAWA Electric Corporation
Founded	July 16, 1915
Employees	Consolidated: 12,449 Non-consolidated: 2,787
Head Office	2-1 Kurosakishiroishi, Yahatanishi-ku, Kitakyushu 806-0004, Japan Phone +81-93-645-8801 Fax. +81-93-645-8831
Tokyo Office	New Pier Takeshiba South Tower, 1-16-1 Kaigan, Minato-ku, Tokyo 105-6891, Japan Phone +81-3-5402-4511 Fax. +81-3-5402-4580

Sales Offices	Chubu Office	Phone +81-561-36-9310 Fax. +81-561-36-9311
	Osaka Office	Phone +81-6-6346-4500 Fax. +81-6-6346-4555
	Kyushu Office	Phone +81-92-714-5331 Fax. +81-92-714-5799
Plants	Yahata-nishi Plant, Yukuhashi Plant, Iruma Plant, Nakama Plant, China (Shenyang, Changzhou, Shanghai)	
Laboratories	Corporate Research & Development Center (Kokura Plant), Tsukuba Research Laboratory	

## Group Companies

Japan	YASKAWA ELECTRIC ENGINEERING CORPORATION Maintenance, test operation and adjustment of electric machines and facilities and technical training
	YASKAWA CONTROLS CO., LTD. Manufacturing and sales of electric machines, and parts
	YASKAWA MOTOR CORPORATION Design, manufacturing, sales and maintenance of motors, generators and motor applications
Europe	YASKAWA MECHATREC CORPORATION Sales of electric machines and other machinery
	YASKAWA EUROPE GmbH (Germany) Manufacturing, sales, and after-sales service of AC drives, servo motors and controllers. Sales and after-sales service of robots
	YASKAWA NORDIC AB (Sweden) Sales and after-sales service of robots
	YASKAWA ELECTRIC UK LTD. (U.K.) Manufacturing, sales, and after-sales service of AC drives and servo amplifiers
	YASKAWA EUROPE TECHNOLOGY LTD. (Israel) Development, manufacturing, sales, and after-sales service of servo motors and controllers. Sales and after-sales service of robots
	THE SWITCH ENGINEERING OY (Finland) Development, manufacturing and sales of electrical products for wind-power generation
	VIPA GmbH (Germany) Development, manufacturing and sales of PLC, I/O, and HMI
YASKAWA EUROPE ROBOTICS D.O.O. (Slovenia) Development and manufacturing of robots	

Asia	YASKAWA ELECTRIC (CHINA) CO., LTD. (China) Sales and after-sales service of AC drives, servo motors and controllers
	YASKAWA ELECTRIC KOREA CORPORATION (Korea) Sales and after-sales service of AC drives, servo motors, controllers and robots
	YASKAWA ELECTRIC (SINGAPORE) PTE. LTD. (Singapore) Sales and after-sales service of AC drives, servo motors, controllers and robots
	SHANGHAI YASKAWA DRIVE CO., LTD. (China) Manufacturing and sales of AC drives
	YASKAWA ELECTRIC TAIWAN CORPORATION (Taiwan) Sales and after-sales service of AC drives, servo motors, controllers and robots
	YASKAWA ELECTRIC (SHENYANG) CO., LTD. (China) Manufacturing, sales, and after-sales service of servo motors and controllers
	YASKAWA SHOUGANG ROBOT CO., LTD. (China) Sales and after-sales service of robots
	YASKAWA (CHINA) ROBOTICS CO., LTD. (China) Manufacturing and sales of robots and robot systems
	YASKAWA ELECTRIC INDIA PVT. LTD. (India) Manufacturing and sales of AC drives. Sales and after-sales service of robots
	YASKAWA TSUSHO (SHANGHAI) CO., LTD. (China) Sales of AC drives, servo motors, controllers and robots
The Americas	YASKAWA AMERICA, INC. (U.S.A.) Manufacturing, sales, and after-sales service of AC drives, servo motors and controllers. Sales and after-sales service of robots
	SOLECTRIA RENEWABLES, LLC (U.S.A.) Development, manufacturing and sales of electrical products for photovoltaic generation

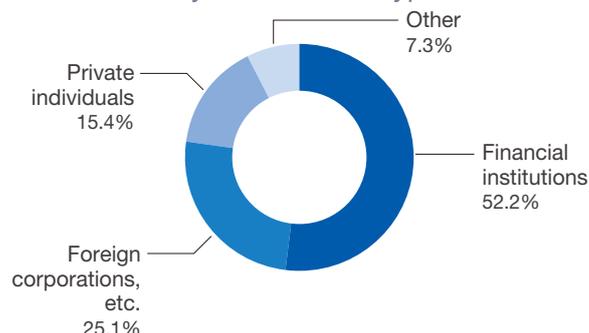


# Stock Information

As of February 28, 2018

Number of Authorized Shares	560,000 thousand
Number of Shares Outstanding	266,690 thousand
Capital Stock	30,562 million yen
Number of Shareholders	74,064
Securities Code	6506(Japan)

## Share Distribution by Shareholder Type



## Major Shareholders

Major shareholders (Top 10 shareholders)	Number of shares (Thousands)	Shareholding ratio
Japan Trustee Services Bank, Ltd. (Trust Account)	26,361	9.89%
The Master Trust Bank of Japan, Ltd. (Trust Account)	24,321	9.12%
Mizuho Bank, Ltd. (MHBK)	8,100	3.04%
Japan Trustee Services Bank, Ltd. (Sumitomo Mitsui Trust Bank, Limited Employee Retirement Benefit Trust Account)	7,970	2.99%
Meiji Yasuda Life Insurance Company	7,774	2.92%
Japan Trustee Services Bank, Ltd. (Sumitomo Mitsui Trust Bank, Limited Re-trust Account, The Bank of Fukuoka, Ltd. Employee Retirement Benefit Trust Account)	6,375	2.39%
Japan Trustee Services Bank, Ltd. (Trust Account 5)	4,429	1.66%
STATE STREET BANK WEST CLIENT-TREATY 505234	4,336	1.63%
BBH FOR GLOBAL X ROBOTICS AND ARTIFICIAL INTELLIGENCE ETF	4,121	1.55%
THE DAI-ICHI LIFE INSURANCE COMPANY, LTD.	4,092	1.54%

Note: Treasury stock is deducted in the calculation of the shareholding ratio.

## Company Share Price (From January 2015 to February 2018)



Note: The prices displayed are the monthly high and low prices traded at Tokyo Stock Exchange.

Vision

Financial Capital

Manufactured Capital

Intellectual Capital

Human Capital

Social and Relationship Capital

Natural Capital

Corporate Governance

Financial and Corporate Information



**YASKAWA**

**YASKAWA ELECTRIC CORPORATION**

2-1 Kurosakishiroishi, Yahatanishi-ku, Kitakyushu 806-0004, Japan

Phone +81-93-645-8801 Fax +81-93-645-8831

URL <https://www.yaskawa-global.com/>

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