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 Model

Market Share (Company estimate)

AC servo drives







Breakdown of Revenue by Region in FY2020



Net Sales/Revenue, Operating Profit, Operating Profit Ratio*



- Operating profit ratio (Right axis)

Market Share (Company estimate) Industrial robot



Market Share (Company estimate) Steel plant systems (Blast furnace)



Breakdown of Revenue by Region in FY2020



Net Sales/Revenue, Operating Profit, Operating Profit Ratio*



Net Sales/Revenue, Operating Profit, Operating Profit Ratio*



Net sales/Revenue (Left axis)
 Operating profit (Left axis)
 Operating profit ratio (Right axis)

* Results up to FY2017 are based on Japanese GAAP, and results after FY2018 are based on International Financial Reporting Standards (IFRS.)

Breakdown of Revenue by Region in FY2020 Asian Countries except China



MOTION CONTROL

AC Servo & Controller Business

Enhancing machine performance as major components incorporated in production equipment





Role of AC Servo Drives in Manufacturing DX

In the manufacturing industry, it is important to collect, analyze and utilize various data from equipment in order to improve manufacturing productivity. AC servo drive is a key component for driving the various devices used in manufacturing. By using AC servo drive, which controls the motion of equipment, as a sensor and acquiring various data from the equipment, we can provide new added value to manufacturing sites, such as preventive maintenance of equipment and improvement of production quality. The Σ -X series, which was launched in March 2021, not only offers the industry's best motion performance, but also enhances the ability to utilize sensing data, thereby contributing to the enhancement of added value of customers from the manufacturing site.

FY2020 Results and FY2021 Plans

In FY2020, in addition to growth in revenue due to increased demand in China for new infrastructurerelated products such as 5G and new energy, robust global demand for capital investment in the semiconductor and electronic components markets such as smartphones and data centers contributed to robust sales. The Σ -X series of AC servo drive was launched in March 2021. In FY2021, we will continue to further evolve "i³-Mechatronics" solution capabilities and expand the range of components that respond to the changes in production systems. Through these efforts, we aim to build a highly profitable structure.

SWOT Analysis of Business

Weaknesses : Challenges
 Speed-up of the process from development to mass
production
Reinforcement of production response to rapid changes in
demand
 Evolution from component sales to sales of integrated
solutions
Threats : Business Risks
Supply chain disruptions associated with geopolitical risks
Pricing strategies by manufacturers in emerging
countries
• Emergence of an actuator that can surpass the motor in

"Challenge 25 Plus" (FY2019 - FY2022) Goals

Establish a global No.1 position as a leading company by further evolving "i³-Mechatronics" solution capabilities and expanding the range of components that respond to the changes in production systems, and by building a highly profitable structure

Progress on the "Challenge 25 Plus"

Progress of Measures	FY2022 Financial Targets
Development: • Accelerate development of strategic products that realize "i ³ -Mechatronics"	Revenue: 221.0 billion yen
 Production: Deployment of the YASKAWA Solution Factory concept to overseas production sites 	Operating profit: 43.7
 Sales: Launch of the Σ-X series of AC servo drive to increase customer value with the industry's best motion performance and digital data solution Strengthen relationships with customers and create sales opportunities through top-level sales activities 	Operating profit ratio: 19.8%
Improved profitability:Improving productivity in indirect operations through the application of the latest production methods	

MOTION CONTROL

•AC Drive Business

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





Role of AC Drives in Society and Industry

AC drive is a device that can continuously change the motor rotation speed by converting the voltage and frequency of the power supply. The use of AC drive makes advanced motor control possible, while at the same time contributing to energy conservation by operating only as much as necessary. AC drive may be widely applied to machinery and equipment in which motors are used, and the market size is estimated to reach 1.5 trillion yen worldwide. In the past, drivers of market growth for AC drives were (1) the advancement of electrification accompanying the advancement of industry, and (2) the rise of emerging economies. Recently, however, as part of efforts to realize sustainability in each country, attention has been focused once again on the energy conservation effects of using AC drive. AC drive is increasing its presence as an indispensable device for the sustainable development of society and industry.

FY2020 Results and FY2021 Plans

FY2020 was a tough year. In particular, the prolonged slump in the U.S. oil and gas market caused by the sharp decline in crude oil prices hurt revenue. In order to establish a business structure that is less susceptible to fluctuations in specific markets, we are working to realize the "Vision 2025" by accelerating the expansion of applications (HVAC, fans, pumps, etc.) that emphasize energy-saving

performance.

We expect demand to recover in FY2021. Since March 2021, orders have been increasing rapidly on a global basis, and revenue is expected to be capped by production capacity as well as a shortage of parts due to the global economic recovery. We will strive to maximize revenue by preparing to provide customers with the

quantities they need. In addition, the lineup of the new AC drive series is almost complete, and the transition to the new series will begin in earnest. The higher proportion of

revenue in the Americas and China, which have relatively high profit margins, and the expansion of the new series ratio are expected to improve profit margins.

SWOT Analysis of Business

Strengths : Strengths of Our Business and Weaknesses : Challenges Differentiation Accelerated volume expansion, growth scenario • Improvement of development speed including new • Power electronics technology and high-efficiency motor technology technologies • Control and sensing technologies based on motor drives • Improvement in cost competitiveness In-house production of main parts developed over many years · Knowledge of how machines and facilities are used (applications) based on system engineering • Worldwide sales and service bases, development centers, and production plants **Opportunities : Business Opportunities Threats : Business Risks** • Expansion of energy conservation promotion poli-• Movement toward in-house production by some cies in each country based on the sustainability customers codes (SDGs, carbon neutral, etc.) • High dependence on specific markets such as oil • Accelerate factory automation including 5G and IoT and gas markets • Enhancing the performance of industrial equipment • Parts procurement risk due to rapid growth in 5G through AI, etc. and EV • Rise of emerging market competitors • Rise of market in emerging countries • Enhancement of high-efficiency motor regulations

"Challenge 25 Plus" (FY2019 - FY2022) Goals

Steadily expand revenue of Yaskawa's strong area, driving-performance-oriented applications (general machinery, oil and gas, elevators, cranes, etc.,) as well as market development for energy-saving performance-oriented applications, for which demand is expected to expand in the medium term, by leveraging the proposal capabilities of PM motors and AC drive, thereby boosting growth potential

Progress on the "Challenge 25 Plus"

Progress of Measures	FY2022 Financial Targets
Development:Completion of product lineup for AC drive's new series and development of PM motors for HVAC	Revenue: 221.0 billion yen
 Production: Established a high-efficiency production system through the introduction of a new production system Sales: Strengthened systems to identify potential needs together with customers Strengthened development of energy-saving markets, particularly in Asia Improved profitability: 	Operating profit: 43.7 billion yen Operating profit ratio: 19.8 %
• Increase the added value ratio by expanding sales of the new series globally	

ROBOTICS

Responding to the growing need for labor-saving and automation at production sites, we are taking on the challenge of realizing a new industrial automation revolution.



Revenue Breakdown by Application (FY2020 Results)



General / Other (Handling, etc.) Approx. **45**% (Arc welding, painting, etc.) Approx. 48 % Semiconductorand LCDrelated applications

Automotive-related

applications

Approx. 7 %

Role of Robots in Manufacturing

Industrial robots contribute to automation of welding, painting, assembly, and transportation in a variety of fields, including the automotive market. In recent years, against the backdrop of labor shortages and the prevention of the spread of infectious diseases, demand in general industrial fields such as the food, pharmaceuticals and cosmetics and the 3C market (computers, consumer appliances and communications equipment) has increased.

In the field of manufacturing in the future, in addition to the

FY2020 Results and FY2021 Plans

In the robotics business in FY2020, capital investment recovered globally toward the end of the fiscal year in the automotive sector, which is a key market, but growth in revenue was sluggish in the first half due largely to the impact of the COVID-19 infection. On the other hand, sales of semiconductor robots were strong, and capital investment in the general industrial sector was also seen against the backdrop of the growing need for automation, particularly in China. In this environment, realization of multi-product variable-volume production, there is expected to be a growing need for smarter manufacturing by improving production efficiency, quality, and traceability. Under these circumstances, Yaskawa will further enhance the judgment and work capabilities of robots, contribute to further automation and optimization in existing manufacturing sites, and take on the challenge of realizing an industrial automation revolution by providing new automation solutions in areas where robots have traditionally been difficult to apply.

Yaskawa introduced new products, such as multi-purpose robots, new palletizing robots, and semiconductor wafer handling robots, in an effort to expand its product lineup.

In FY2021, although the outlook remains uncertain due to the prolonged spread of the COVID-19, we expect a steady global recovery due to the increasing need for automation in a wide range of fields. Yaskawa will strive to increase earnings by improving its ability to adjust production capacity to respond to

Weaknesses: Challenges

fluctuations in demand in order to capture a recovery in key markets and new growth markets. In addition, we will continue to develop new products and application technologies that

Strengths : Strengths of Our Business and

SWOT Analysis of Business

realize the "i³-Mechatronics" concept, and will implement solution proposals based on this concept to achieve high growth by expanding our business domains.

 Differentiation Developed Japan's first all-electric articulated robot in 1977 Respond to diversified automation needs with the world's broadest product lineup The servo motor, which is the most important factor for the performance of the robot, is manufactured in-house Securing competitive advantage by improving robot performance and reducing production costs Cross-business development system utilizing YASKAWA Technology Center 	 Strengthen production flexibility in response to rapid changes in demand and improve profitability Develop new technologies and business fields through open innovation Establishing and expanding sales channels of collaborative robots
 Opportunities : Business Opportunities Expanded demand for labor saving and automation in general industries Manufacturing innovation in the automobile industry (including the shift to EVs) Enhancement of production through IoT 	 Threats : Business Risks Decline in demand for capital investment due to geopolitical risks Rise of emerging manufacturers

"Challenge 25 Plus" (FY2019 - FY2022) Goals

• Global capacity realignment and optimization of production systems and cost structures

Based on our strategy to provide solutions to end users through the implementation of the "i³-Mechatronics" concept, achieve growth that exceeds the growth of the robot market by expanding our business domain, and realize a business structure in which profitability will significantly increase along with volume growth.

Progress on the "Challenge 25 Plus"

Progress of Measures	FY2022 Financial Targets
Development: •Based on the concept of "i ³ -Mechatronics," we have developed products with the aim of achieving autonomous, distributed manufacturing driven by data	Revenue: 117.7 billion yen
(Autonomous robots, digital twin, etc.)Expand lineup of collaborative robots, versatile robots for general markets, SCARA robots, palletizing robots, semiconductor wafer handling robots, etc.	Operating profit: 19.5 billion yen
 Production: Full-scale mass production of robots began in Slovenia Improved productivity through introduction of collaborative robot and YASKAWA Solution Factory concept 	Operating profit ratio: 11.0 %
 Sales: Automotive market: Proposed total solutions based on the "j³-Mechatronics" concept to respond to changes in production processes and expansion of the automation domain General market: Promoted activities to expand the robotics field in growth markets centered on the China 3C market 	
 Improved profitability: Increased value added rate through production automation 	

SYSTEM ENGINEERING

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



Revenue Breakdown by Application (FY2020 Results)



Business Overview of System Engineering

Yaskawa Group has a wealth of experience in the development, design, and production of industrial system electrical equipment, including large steel plant facilities, over many years. The system engineering technology and electrical products cultivated to date contribute to the automation and stable operation of facilities in steel plants, water treatment plant and large crane equipment markets.

FY2020 Results and FY2021 Plans

In FY2020, although sales of PV inverter for solar power generation were sluggish, sales of social system-related products such as electrical appliances for large-scale wind power generation and electrical systems for water and sewage treatment remained firm in the environmental energy and social systems businesses.

In the industrial automation drive business, we were able to limit revenue decline to a small extent by offering remote system proposals to customers and conducting remote test runs, especially when we were unable to conduct activities overseas due to the spread of COVID-19.

Operating profit decreased due to the provision of temporary product repair costs.

We are also contributing to the expansion of the use of renewable energy in environmental energy markets such as solar power generation and large-scale wind power generation. We provide total solutions with advanced system technology and high-quality products, build reliable social and industrial systems, and contribute to a comfortable and sustainable society.

In FY2021, we will continue to supply products to the growing offshore wind power market and expand sales for large-scale solar power generation applications in the environmental and social systems business, in view of the growing market for decarbonization. We will also contribute to a decarbonized society by developing PV inverter for the home consumption market and for replacement demand. In the social systemsrelated business, we will continue to maintain and improve our highly profitable structure while accelerating our digitalization efforts through development utilizing AI, CPS and IoT. In the industrial automation drive business, we will focus on the recovery of the market, the expansion of investment in the EV related market and carbon neutral market, and the large-scale investment plan for automated cranes in Southeast Asia.

SWOT Analysis of Business

Strengths: Strengths of Our Business and Differentiation

- Power conversion technology and automation/remote technology for energy saving and high efficiency
- Reliable technological and customer service capabilities that can meet the needs for PV inverters and electrical products for large-scale wind power generation in the diversifying renewable energy market, as well as a rich record of delivery
- Achievements in the field of electric systems for water supply and sewage and system technology development capabilities
- 100% domestic share of systems for blast furnaces in steel plants
- Share higher than 50% in port crane market in Japan, China and Southeast Asia
- Top-class share in Japan in the industrial electric business including film, textiles, and paper machinery

Opportunities: Business Opportunities

- Increasing demand for renewable energy for a decarbonized society
- The market for wind power generation grows over the medium to long term, particularly for offshore wind power.
- Need for labor-saving and high-efficiency electricity systems for water and sewage systems using IoT, AI and robots
- Increase in the investment for production of new materials for EVs
- Full automation and remote operation of harbor cranes
- Responding to carbon neutrality initiatives

Weaknesses: Challenges

- Improvement in cost competitiveness
- Improvement in product development speed
- Creation of business synergies

Threats: Business Risks

- Oligopolization of wind turbine manufacturers and in-house production
- Modification of feed-in tariffs and grid interconnection regulations for renewable energy
- Intensifying cost competition
- Decline in infrastructure investment in Japan

"Challenge 25 Plus" (FY2019 – FY2022) Goals

Achieve stable earnings by strengthening profitability in the environmental energy businesses and pursuing high profitability in the social systems and industrial automation drive businesses

Progress on the "Challenge 25 Plus"

Progress of Measures	FY2022 Financial Targets
 Development: Start of development of PV inverter for private consumption and replacement demand Promotion of miniaturization of induction motors and development of large-capacity drive panels and integrated controllers Production: Stable supply of large generators for wind power generation Centralized product development and production of industrial drive system equipment and motors, control panel manufacturing, engineering, and after-sales service 	Revenue:51.0 Dillion yenOperating profit:2.0 Dillion yenOperating profit ratio:3.0 Dillion yen
 Sales: Launched PV inverter XGI 1500 for photovoltaic power generation Continued orders for large-scale wind power projects Implementation and examination of value-added proposals for social systems, steel, industrial electric, and cranes 	0.0%
 Improved profitability: Strengthen approaches to EV-related markets and high-profit markets, and withdraw from unprofitable fields 	

Increase added value through thorough cost reduction