YASKAWA

Investor's Guide
Main Part

Notes:

- **This material is composed mainly of basic contents to promote understanding of Yaskawa for analysts and investors.**
- **Figures in this document are rounded off and may differ from those in other documents such as financial results.**
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February 2023

YASKAWA ELECTRIC CORPORATION
(TSE6506)

What is Yaskawa?

- **Turning motors for 100 years**
- **Helping to build systems supporting industries and societies**
- **Three globally competitive products; Industrial robots/AC servo drives/AC drives**

Industrial robots
MOTOMAN Series

AC servo drive
Σ-X Series

AC drives
New series

目次

1. Corporate Profile and Business Overview

Founding Spirit

Our Company was founded by Daigoro Yasukawa in 1915 with the aim of "setting up an industry to repay the debt of gratitude to the State", an aspiration held by his father Keiichiro Yasukawa.

Keiichiro Yasukawa

Daigoro Yasukawa

Our Purpose

Yaskawa's mission is to contribute broadly to social development and human welfare through the execution of our business. To achieve the mission, our group has set the following three objectives and work hard to achieve them.

1. **Quality** Always developing and improving world-class technologies with a focus on quality
2. **Profit** Working to improve management efficiency and secure Profit necessary for the sustainable growth
3. **Market** Serving the needs of our customers and pursuing customer satisfaction

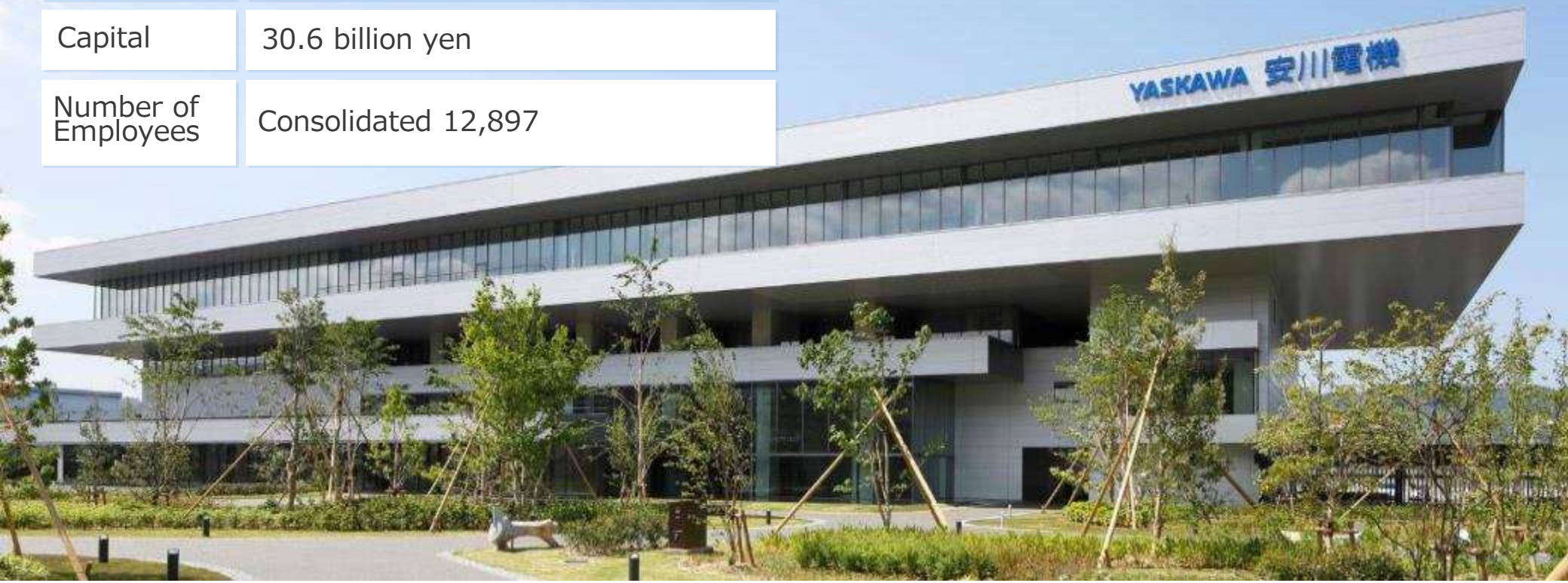
Profile

(As of February 28, 2022)

*Consolidated fiscal year from March 1, 2021 to February 28, 2022

Corporate Name	YASKAWA Electric Corporation
Founded	July 16, 1915
Head Office Location	2-1 KurosakiShiroishi, Yahatanishi-ku, Kitakyushu Fukuoka JAPAN
Capital	30.6 billion yen
Number of Employees	Consolidated 12,897

Revenue	479.1 billion yen
Main Business	・Motion Control (AC servos, controllers and AC drives) ・Robotics ・System Engineering



Business History

Founder
Daigoro
Yasukawa

Representative Director,
President
(FY 2023 -)
Masahiro Ogawa

Founded
1915 — 1950 — 1980 — 1990 — 2000 — 2015
100 th anniversary

Electric motors (for coal mining)

System Engineering

Electric systems (Steel, paper, film plants, water supply plants and sewage treatment plants)

1917 - Commercialized "three-phase induction motor".

1958 – Invention of "Minertia Motor"

1977 – Debut of Japan's first full electric industrial robot

AC Drives

DC Servomotors

AC Servomotors

Industrial Robots

Shifted the focus on Mechatronics field

Glass sheet transfer robot

Semiconductor wafer transfer robot

Environmental and energy equipment

Medical and welfare robots

Food and agriculture

Launch of Solution Concept i³-Mechatronics

*"Mechatronics" is a combining word with mechanism (mechanical engineering) and electronics (electronic engineering), and Yaskawa has registered the trademark in 1972.

VISION 2025

Factory Automation / Optimization

Mechatronics Applications

Revenue Breakdown by Business Segment

System Engineering

Revenue 52.3 (B JPY)

Core products :
Electrical systems for steel plants
Electrical instrumentation systems for water supply plants and sewage treatment facilities
PV inverters
Large-scale wind power generator and converter


Continuous casting machine


PV inverter XGI1500


Large-scale wind turbine and converter

Robotics

Revenue 178.7 (B JPY)

Small robot MOTOMAN-GP4


Arc-welding robot

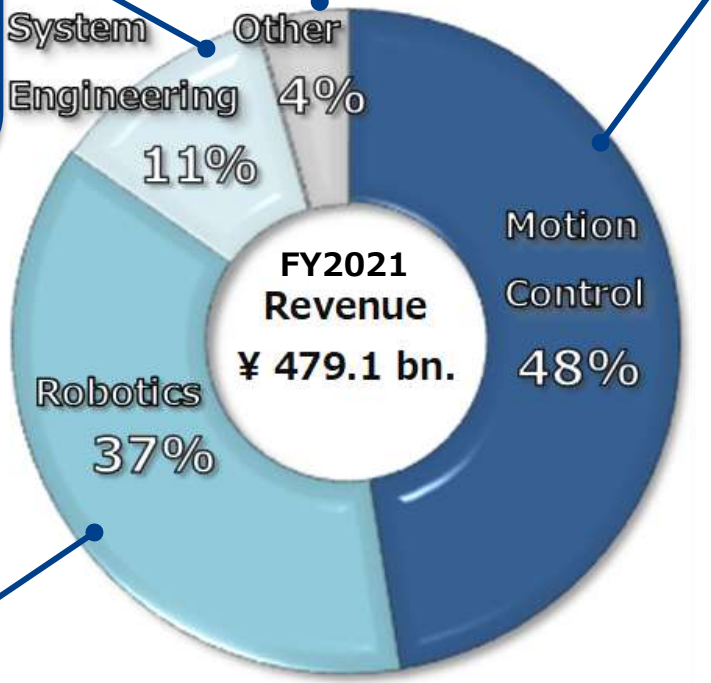

Collaborative robot MOTOMAN-HC30PL

Core products :
Industrial robots
(Welding robots, painting robots, FPD glass sheet transfer robots, Handling robots)
Semiconductor wafer transfer robots
Biomedical robots
Collaborative robots. etc.

Other

Revenue 20.9 (B JPY)

Core products
Logistics, etc.



Motion Control

Revenue 227.3 (B JPY)

- **AC servo and controller (63%)**


AC servo drive Σ-X series


YRM-X controller

Target Markets :
Semiconductor and FPD manufacturing devices, chip mounters, machine tools, injection molding and metal forming machines, etc.

- **Drives (37%)**

Yaskawa AC drive new series

ECO PM motor

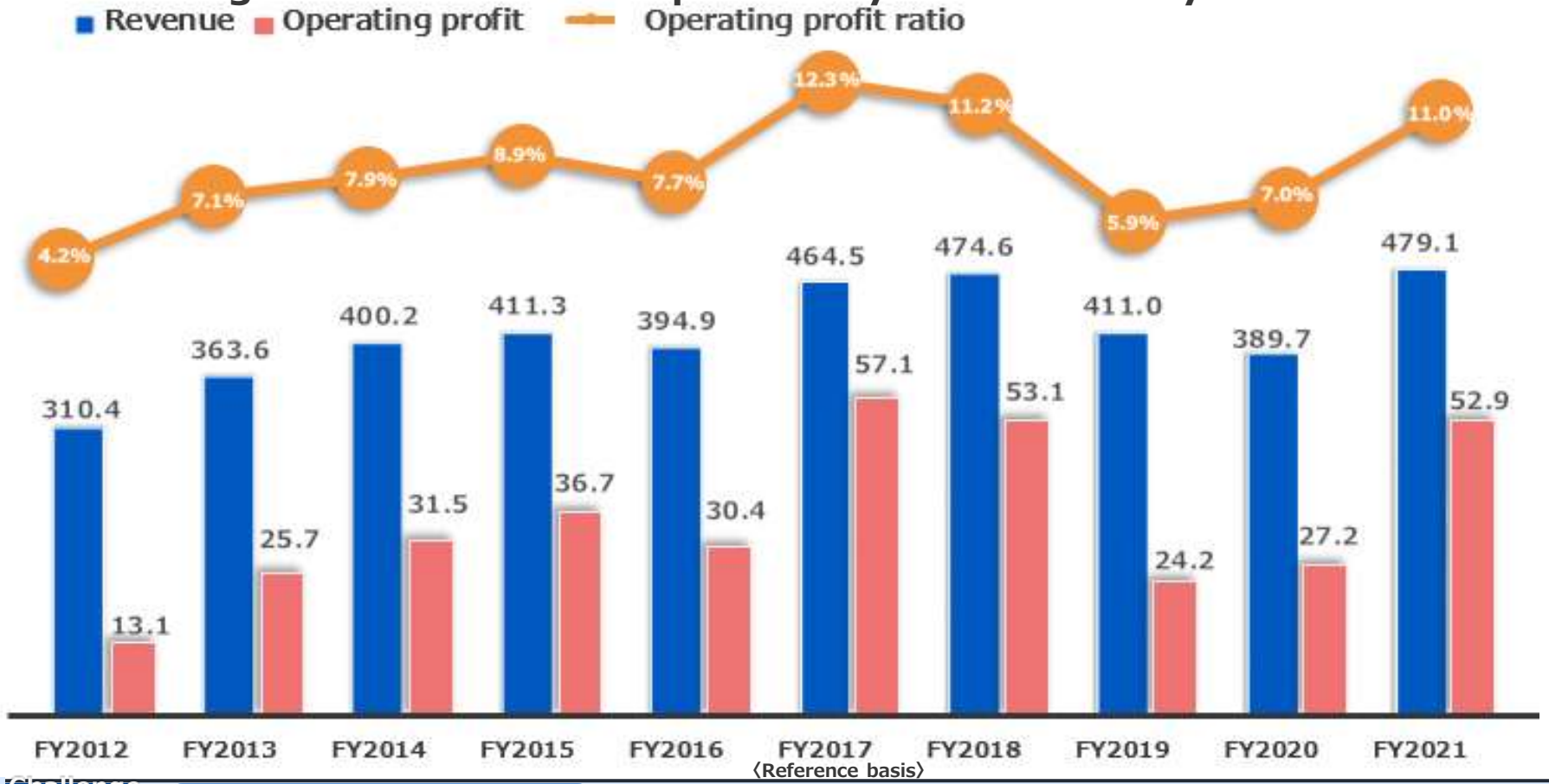

Matrix converter U1000

Target Markets :
Elevators and escalators, HVAC, textile machines, port cranes, etc.

Revenue / Operating Profit (FY2012 – FY2021)

- **Setting operating profit as the most important KGI**
- **Formulating mid-term business plan every three to four years**

(Billions of yen)



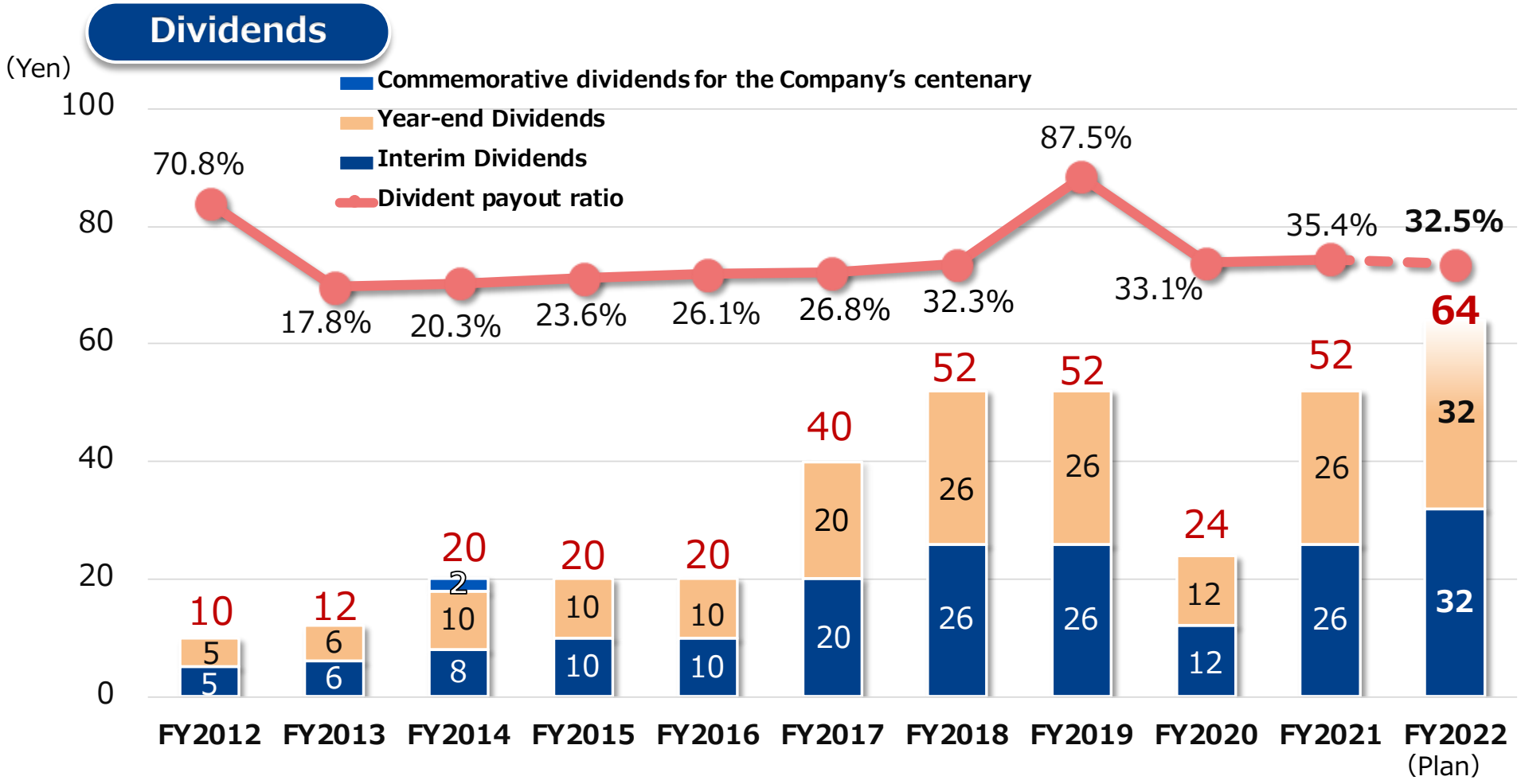
Challenge 100 | Realize 100 | Dash 25 | Challenge 25 Plus

Mid-term business plans

Note1: Data up to FY2017 are based on Japanese GAAP.
Note2: The data for FY2017 are made on a reference basis. (March 21, 2017 – March 20, 2018)

Shareholder Return（Dividends）

- **The cash generated by business activities is effectively allocated in three directions: (1) growth investments (2) shareholder returns (3) return to employees**
- **The policy of shareholder returns is based on a payout ratio of 30% + α.**



Network in Japan

■ **Head office** (Robot Village) **/ Yaskawa Technology Center**
■ **Yahata-nishi plant** (Robot Plant / Yaskawa Innovation Center)
■ **Yahata-higashi Plant** (Motion Control Plant / Motor Plant)
■ **Nakama plant** (Robot plant)

■ **Iruma plant**
(Yaskawa Solution Factory / Motion Control Plant)

■ **Yukuhashi plant**
(Drive Center / System Engineering Center)

Tohoku sales office
Hokuriku sales office
Nagano sales office
Keiji sales office
Tsukuba Research Laboratory
Kanto Robot Center
Kyushu office
Tokyo branch
Chugoku sales office
Hachioji sales office
Hamamatsu sales office
Kumamoto sales office
Osaka office
Chubu office / Chubu Robot Center

■ : Business office /Laboratory
● : Regional offices
◘ :sales offices

Global Network

Business locations: 30 countries
Production sites: 13 countries, 29 sites

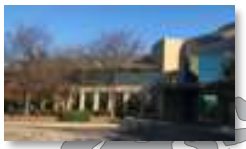
YASKAWA NORDIC AB
Sweden

THE SWITCH ENGINEERING OY
Finland

YASKAWA EUROPE ROBOTICS D.O.O.
Slovenia

Yaskawa Electric (Shenyang) Co., Ltd.
China

YASKAWA ELECTRIC KOREA CORPORATION
South Korea



YASKAWA AMERICA, INC. Drives & Motion Division
USA

YASKAWA Canada INC.
Canada

YASKAWA SHOUGANG ROBOT CO., LTD.
China

Head office

Yaskawa Electric Corp.
Japan

YASKAWA ELECTRIC UK LTD.
Scotland

YASKAWA SLOVENIJA D.O.O.
YASKAWA RISTRO D.O.O.
Slovenia

YASKAWA TURKEY ELEKTRIK TICARET LTD.STI.
Turkey

YASKAWA EUROPE GmbH Drives & Motion Division
Germany

YASKAWA EUROPE GmbH Robotics Division
Germany

YASKAWA EUROPE TECHNOLOGY, LTD.
Israel

YASKAWA TSUSHO (SHANGHAI) CO., LTD.
China

SOLECTRIA RENEWABLES, LLC
USA

YASKAWA Mexico S.A. DE C.V.
Mexico

YASKAWA AMERICA, INC. Motoman Robotics Division
USA

Yaskawa (China) Equipment Co., Ltd.
China

YASKAWA INDIA PRIVATE LIMITED Robotics Division
India

YASKAWA ELECTRIC TAIWAN CORPORATION
Taiwan

YASKAWA INDIA PRIVATE LIMITED Drives Division
India

YASKAWA SOUTHERN AFRICA (PTY) LTD.
South Africa

YASKAWA ASIA PACIFIC PTE. LTD.
Singapore

Yaskawa Electric (China) Co., Ltd.
China

Shanghai Ancheon Electric Equipment Co., Ltd.
China

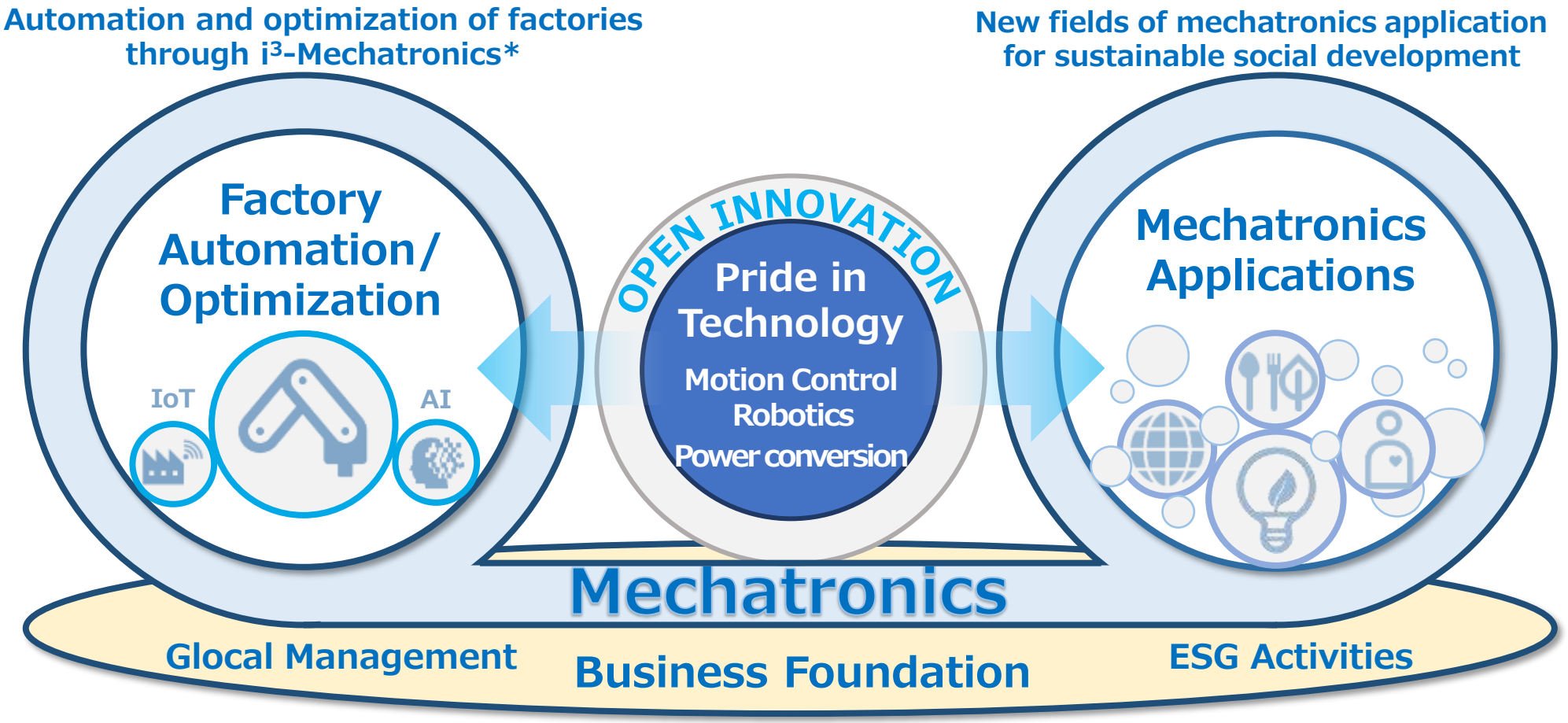
YASKAWA ELECTRICO DO BRASIL LTDA.
MOTOMAN ROBOTICA DO BRASIL, LTDA
Brazil

2. Long-term Business Plan “Vision 2025” (FY2016-FY2025)

Mid-term Business Plan “Challenge 25 Plus” (FY2019-FY2022)

Yaskawa's Vision for 2025

We contribute to solving customers' management issues in addition to creating new added value to society, through evolution of core businesses, and expansion into new fields by applying mechatronics technology



* **i³-Mechatronics:** Yaskawa's solution concept for realizing new industrial automation revolutions

Financial Targets for FY 2025

We set operating profit as the most important KGI to be achieved in FY 2025

	FY2015 Actual (JPY)	FY2025 Targets (JPY)
Operating Profit	36.7 billion	Over 100 billion
ROE *1	12.8%	15.0% or more
ROIC *2	11.3%	15.0% or more
Divided Payout Ratio	23.6%	30.0% + α

***1 ROE:** Return on Equity (return on equity) = Net income attributable to owners of parent/Equity

***2 ROIC:** Return on Invested Capital (return on invested capital) = Net income attributable to owners of parent/Invested capital

Basic Policies of “Challenge 25 Plus”

Promote and strengthen businesses that contribute to the development of sustainable society and accelerate improvement of profitability by management efficiency through YDX*.

Basic Policy 1

i³-Mechatronics

Transform Business Model through i³-Mechatronics

Basic Policy 2

Maximize profitability in the growing market through i³-Mechatronics

Basic Policy 3

Expand new domains for building a sustainable society

Develop new technologies and business domains through open innovation

Strengthening the Management Foundation through YDX

Digital Management

Work style innovation

*YDX: YASKAWA Digital Transformation

Basic Policy 1. Transform Business Model through i³-Mechatronics

Contribute to solving customers' management issues through cross-business initiatives with evolution of manufacturing, sales and technology

Make Our Customers Win

Develop technologies/products to realize i³-Mechatronics

Develop technologies and products
that accurately meets customer needs timely by integrated development functions

Strengthen sales capability to realize i³-Mechatronics

Offer optimal solutions
through communication with customers including top management

Strengthen service businesses through demonstration of i³-Mechatronics

Develop new services
that contribute to improving customers' production efficiency

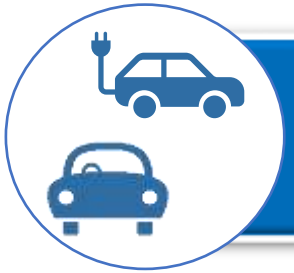
Strengthen manufacturing functions to demonstrate i³-Mechatronics

Develop concept of "Yaskawa Solution Factory"
that will transform manufacturing and business

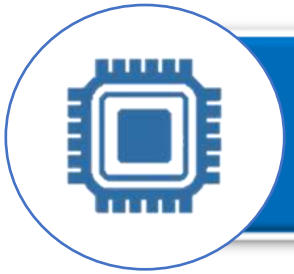
Basic Policy 2. Maximize Profitability in the Growing Market through i³-Mechatronics

Business expansion by leveraging open innovation in the rapid growing "Robotics" market*1

Strengthen creating market presence in China and Asia, centered on **"3C*2 " "New Infrastructure*3"** market



Promote initiatives with car and parts manufacturers in **"Automotive"** market



Strengthen initiatives in the **"Semiconductor"** production equipment market

*1 **"Robotics" Market:** Automation area including robots
*2 **3C:** Abbreviations for consumer and digital communications equipment (from the acronyms Computer, Communication and Consumer Electronics)
*3 **New Infrastructure:** Digitization of industries in China, centered on 7 fields which includes the next-generation communications standard "5G", "new-energy vehicles", and "AI."

Basic Policy 3. Expand New Domains for Building a Sustainable Society

Contribute to realizing sustainable society through world-class mechatronic technologies

AC Drives
Improve machine performance through expanding products by application

High-efficiency motors
Expand application areas in combination with AC drives

Photovoltaic power generation
Focus on business in Japan and the U.S.

Wind power generation
Focus on business in Europe

Motor drive system for EV
Focus on business of joint ventures in China

SUSTAINABLE DEVELOPMENT GOALS

Automatic vegetable production system
Stabilization of vegetable production which is not affected by climate change

Automation of food production processes
Securing a productive labor force and quality improvement in safety and health

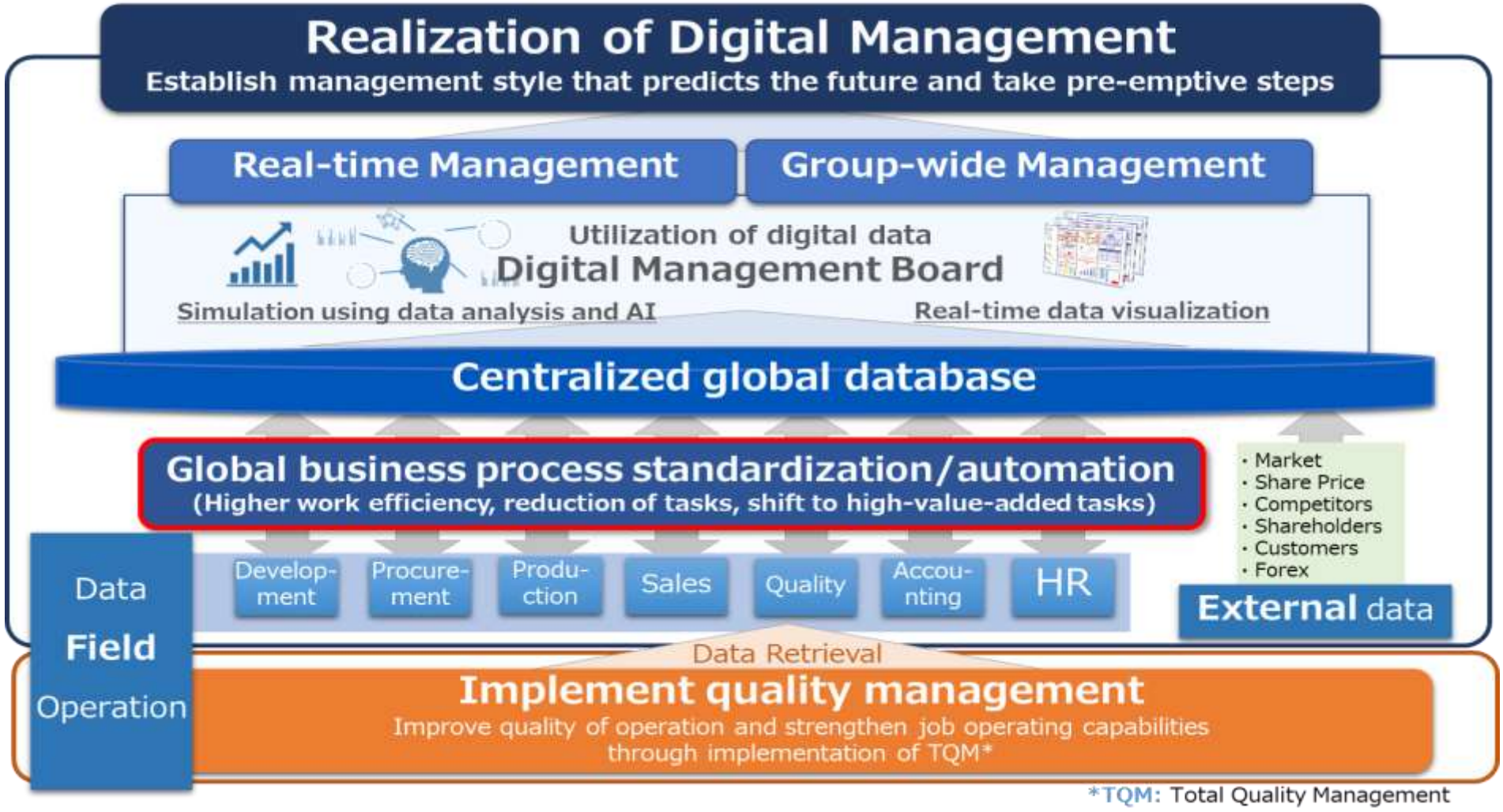
Biomedical
Pre-process of cancer genome diagnostics
iPS cell culture

Rehabilitation
Collaboration with medical and rehabilitation equipment manufacturer

* a coined term combining Human and Mechatronics

Improve Management Efficiency through Digital and Quality Management

Strengthen integrated group management globally and expedite management decisions by unifying management data and standardizing business processes



*TQM: Total Quality Management

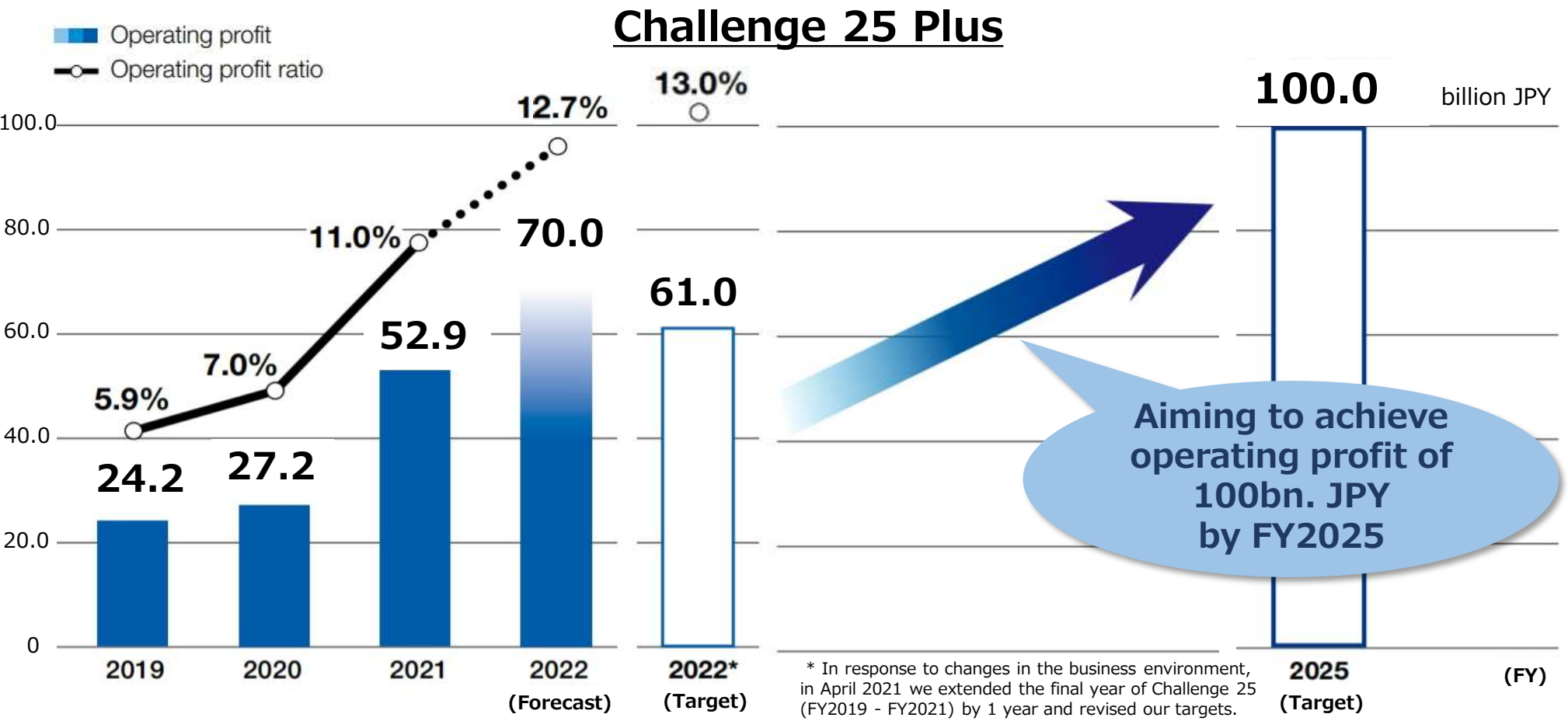
Improve Management Efficiency through YDX

Promote “visualization of data” and “creation of a rewarding workplace” to improve our management structure that is resilient to market changes accelerated by COVID-19

■ Sophisticated business management	■ Improve productivity	■ Work style reform	■ Awareness reform
			
Enhancement of added value through visualization of management data	Efficiency improvement through visualization of business data	Realizing flexible and diverse working styles	Enhancing employee job satisfaction

Progress

We will continue to evolve our business through the i³-Mechatronics concept, and by contributing to the improvement of added value for our customers, we aim to achieve the goals of our vision by realizing the industrial automation revolution and improving profitability.



* In response to changes in the business environment, in April 2021 we extended the final year of Challenge 25 (FY2019 - FY2021) by 1 year and revised our targets.

3. Sustainability

Formulated the policy to strengthen initiatives to contribute to social sustainability

Sustainability Policy

We will strive to realize a sustainable society and increase corporate value through the implementation of the Yaskawa Group Principle of Management which is to leverage the pursuit of our business to contribute to the advancement of society and the well-being of humankind.

1. We will contribute to the value creation for customers and society through creating innovation by cutting-edge mechatronics technologies.
2. We will realize fair and transparent corporate management through communication and collaboration with stakeholders around the world.
3. We will work to resolve social issues globally with the aim of achieving SDGs as a universal goal.

Sustainability Promotion System

Yaskawa Group's Sustainability Challenges and Targets (Materiality)

Under newly formulated Sustainability Policy, identifying materiality and expanding initiatives to solve to the mid-term business plan.

Yaskawa Group's Materiality

Create Social Value and Solve Social Issues through Business Activities

- Realize revolutionary industrial automation with our partners through "i³-Mechatronics"
- Build clean social infrastructure and foundation for safe and comfortable living
- Develop new technologies and business domains through open innovations

Strengthen Management Foundation that Contributes to Sustainable

- Sustainable and productive manufacturing
- Create a rewarding workplace and human resource development
- Fair and transparent governance system

The Risks and Opportunities Identified in the TCFD Scenario Analysis

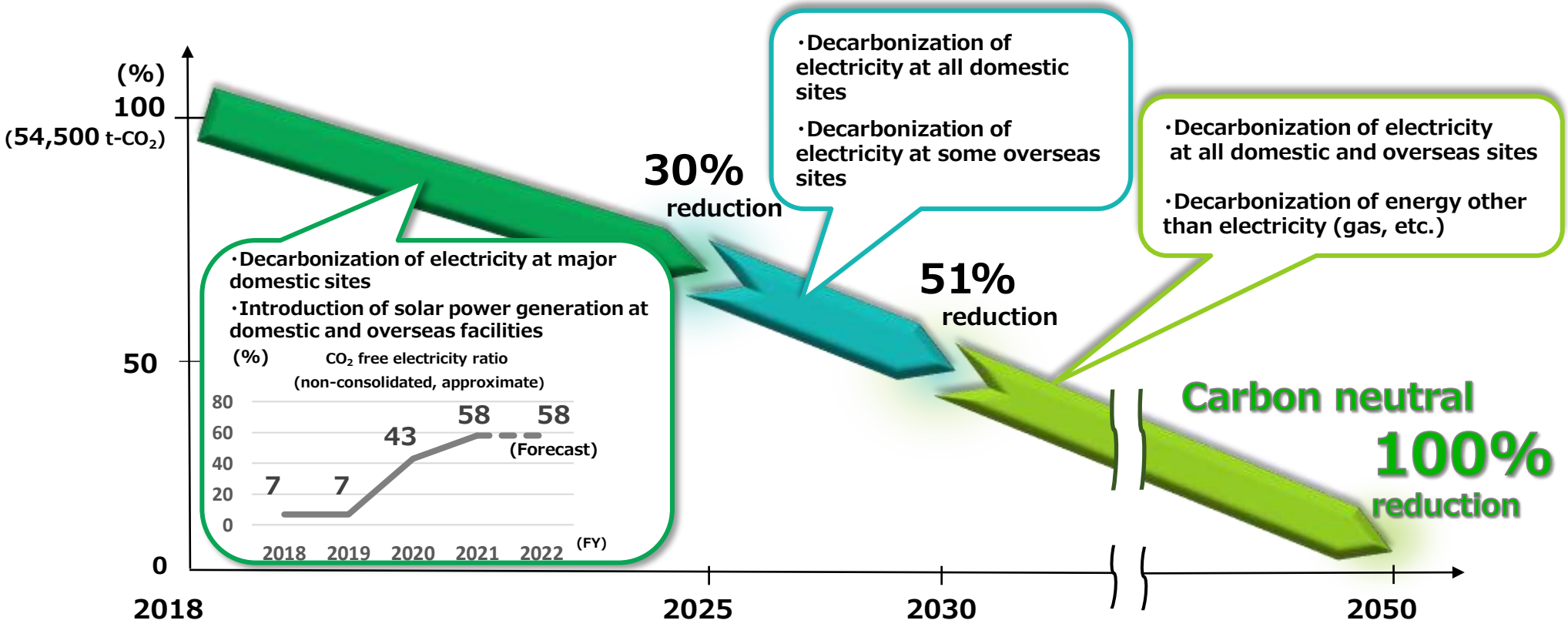
- **The impact of climate change on business was examined.**
- **In terms of financial impact, opportunities of revenue increase will be greater than risks of revenue decrease.**

Business impact on risk and opportunity factors

Risk/ Opportunity	Transition/ Physical	Factor	Impact	Evaluation
Risk	Transition	Carbon price	• Increased fuel and material procurement costs due to the introduction of carbon taxes by national governments.	Serious
		Government policies on carbon emissions	• Increased costs (e.g., purchasing clean energy) that accompany the introduction of emissions trading and the strengthening of emissions regulations.	Serious
		Transformation to energy savings and carbon reductions	• Production impacts due to price increases and procurement difficulties for reasons such as insufficient related materials from electrification and the transition to electric vehicles.	Serious
		Recycling regulations	• Increased costs from using substitute materials, etc., due to regulations such as those on plastics.	Minor
		Growth of low-carbon technologies	• Increased investment costs, such as R & D costs, due to increased competition in the energy saving performance of products against a background of increasing demands for energy savings.	Moderate
		Changing behavior of investors and customers	• Increased support costs due to investors and customers preferring companies that are more environmentally responsive. • Decreased company valuation and loss of business opportunities due to delayed responsiveness to environmental responsibility related to information disclosure and procurement.	Minor
	Physical	Increasing average temperatures	• Increased energy costs due increased air conditioning energy in our factories. • Need to move production sites where the risk of flooding exceeds tolerances due to sea rise.	Moderate
		Intensification of unusual weather	• Operation stoppages, reductions in production, and additional investment to restore equipment from typhoons, tornadoes, and flooding.	Serious
Opportunity	Transition	Transformation to energy savings and carbon reductions	• Increased demands for factory automation devices and industrial AC drives due to increased energy saving needs. • Expanded business opportunities for solutions that increase the productivity and energy saving performance of factories and equipment. • Expanded demand for solar power generators and wind power/geothermal power/biomass power generation equipment due to feed-in tariff incentives and so on. • Expanded business opportunities for electronics in electric vehicles as the electrification of automobiles progresses. • Expanded business opportunities for marine electronics due to increased demands for electric and hybrid ships.	Serious
		Changing behavior of investors and customers	• Increased investor valuation, increased ESG investment, and increased corporate value due to expansion of businesses that contribute to the environment.	Minor

2050 CARBON NEUTRAL CHALLENGE*1 and Prospects for Achievement

- We will achieve net zero CO_2*2 emissions from global business activities (Scope 1 + Scope 2*3) in 2050, and reduce the same CO_2 emissions by 51% from 2018 levels by 2030.(Announced in March 2021, revised in May 2022)
- We will actively invest in the environment to achieve this goal.



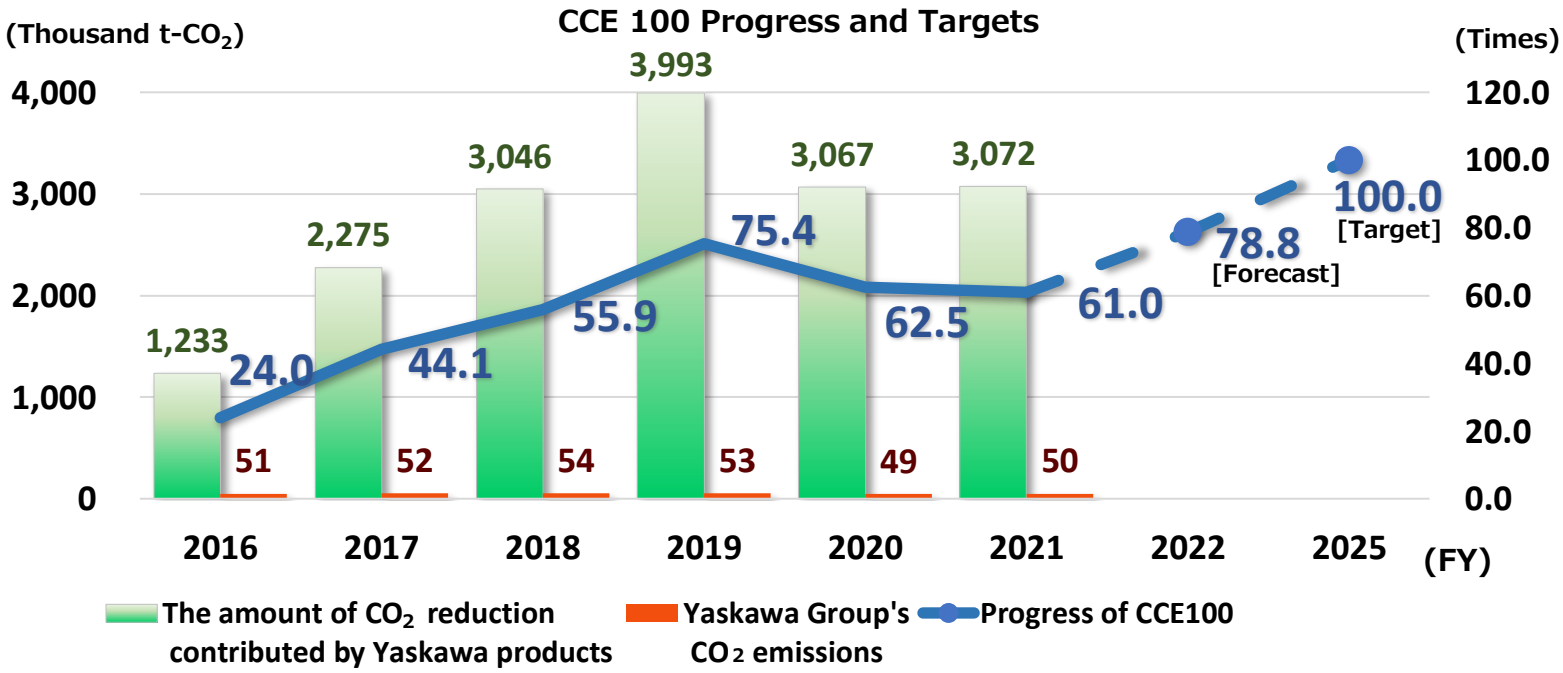
*1 Yaskawa Group's goal of achieving net-zero CO_2 emissions from its global business activities by 2050.
*2 Including carbon dioxide and other greenhouse gases (CFCs, etc.)
*3 Scope 1 is mainly emissions associated with fuel use (direct emissions). Scope 2 refers to emissions associated with the use of purchased electricity and heat (indirect emissions by electric power companies, etc.).

“CCE100” a Unique Environmental Indicator

- **Promoting CCE100*, a target to increase the amount of CO_2 reduction contributed by Yaskawa products to 100 times or more of Yaskawa Group's CO_2 emissions by 2025**
- **Reducing the environmental impact of production activities (Green Processes) and contributing to reducing the environmental impact of customers around the world through Yaskawa products(Green Products)**

* Abbreviation of Contribution to Cool Earth 100

$\frac{CO_2 \text{ reduced through products}}{CO_2 \text{ emitted by the Group}}$ ≧100 : CCE100
Contributions of more than 100 times in 2025



Example for Green Products

AC drive

Matrix converter

Medium voltage AC drive

PV inverter for solar power generation

PM motor

Generator for wind turbine

Robot

History of Initiatives to Enhance Corporate Governance

Fiscal Year		FY2012-2014	FY2015-2017	FY2018-2021
Main measures		FY2012 ・Adoption of executive officer system ・Number of Directors was reduced to 12 from 20 FY2014 ・Compensation Advisory Committee established	FY2015 ・Transition to a company with Audit and Supervisory Committee ・Nomination Advisory Committee established FY2016 ・Evaluation of the effectiveness of the Board of Directors commenced	FY2018 ・More than 1/3 of the board of directors are independent outside directors FY2019 ・Disclosed skill matrix of the board of directors FY2020 ・Determination of basic policies for executive compensation ・Established Corporate Governance Policy of Yaskawa FY2021 ・Established Sustainability Policy
Aim and purpose		・Faster and more efficient management decisionmaking and execution ・Ensuring the appropriateness and transparency of executive compensation	・Strengthening of offensive and defensive governance ・Ensuring transparency and fairness in nomination of director candidates ・Improving the functions of the Board of Directors to increase corporate value	・Improving the independence and objectivity of the Board of Directors ・Enhancement of information disclosure ・Contributing to the realization of a sustainable society in addition to improving corporate value
Institution establishment		Company with Board of Corporate Auditors	Company with Audit and Supervisory Committee	
Composition of the Board of Directors	**Internal**	**6**	**8**[*1]	**8**[*1]
	Independent outside (Female)	**1**	**3**[*1]	**5**[*1]**(1)**
Composition of Audit and Supervisory Committee[*2]	**Internal**	**2**	**2**	**2**
	Independent outside (Female)	**2**	**3**	**4(1)**

Note: The No. of members of the Board of Directors and the Audit and Supervisory Committee are of the latest figure of the corresponding fiscal years on the table.
[*1]Including directors who are members of the Audit and Supervisory Committee.
[*2]Up to FY2014, data indicated as "Board of Corporate Auditors"

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

Yaskawa Electric has adopted a corporate structure with an Audit and Supervisory Committee

Composition of the Board of Directors and Board Skills Matrix

Name	Age	Gender	Attributes	Structure						Field of capability that Yaskawa expect each director to demonstrate						
				Board of Directors	Audit and Supervisory Committee	Nomination Advisory Committee	Remuneration Advisory Committee			Corporate management Management strategy	Corporate governance	Finance Accounting	Legal	Sales Marketing	Manufacturing R & D and IT	Global
Hiroshi Ogasawara	66	♂		◎		◎	○			●	●	●		●	●	●
Shuji Murakami	63	♂		○			○			●	●	●	●			●
Masahiro Ogawa	57	♂		○			○			●	●			●	●	●
Yoshikatsu Minami	62	♂		○						●	●				●	●
Akira Kumagae	59	♂		○						●	●				●	●
Yasuhiko Morikawa	59	♂		○						●	●	●	●			●
Yuichiro Kato	52	♂	Outside Independent	○		○	○			●	●			●	●	●
Yuji Nakayama	62	♂		○	◎					●	●	●				●
Koichi Tsukahata	61	♂		○	○					●	●					●
Junko Sasaki	62	♀	Outside Independent	○	○	○	○			●	●			●	●	●
Hideo Tsukamoto	41	♂	Outside Independent	○	○	○	○			●	●		●			●
Toshikazu Koike	66	♂	Outside Independent	○	○	○	◎			●	●			●		●
Kaori Matsuhashi	52	♀	Outside Independent	○	○	○	○			●	●	●				●

◎Chairperson ○Member

*Note: The above table does not represent the full knowledge of each director. Age is as of the 106th general meeting of shareholders held on May 26, 2022.

4. The Solution Concept
i³-Mechatronics

i³-Mechatronics Concept

i³-Mechatronics

integrated
intelligent
innovative

Advances in Mechatronics though digital data management

Realize revolution of industrial automation

Yaskawa's Solution to Solve Customer's Business Issues

i³-Mechatronics

Business Issues

Realizing Smart Factory

(Use of Robotics and Automation Technology/Use of AI and Big Data)

Variable-type and variable-quantity production

Reduced stock parts and in-process products

Reduced production lead time

Prevention of equipment failure

Elimination of dependency on individual skills in inspection process

Quality improvement (Identification of causes of defects)

i³-Mechatronics

Yaskawa has provided many solutions, such as automation with mechatronics technologies and products like AC servo drives, AC drives, and robots to meet our customer's demand for the higher productivity and higher quality on a daily basis.

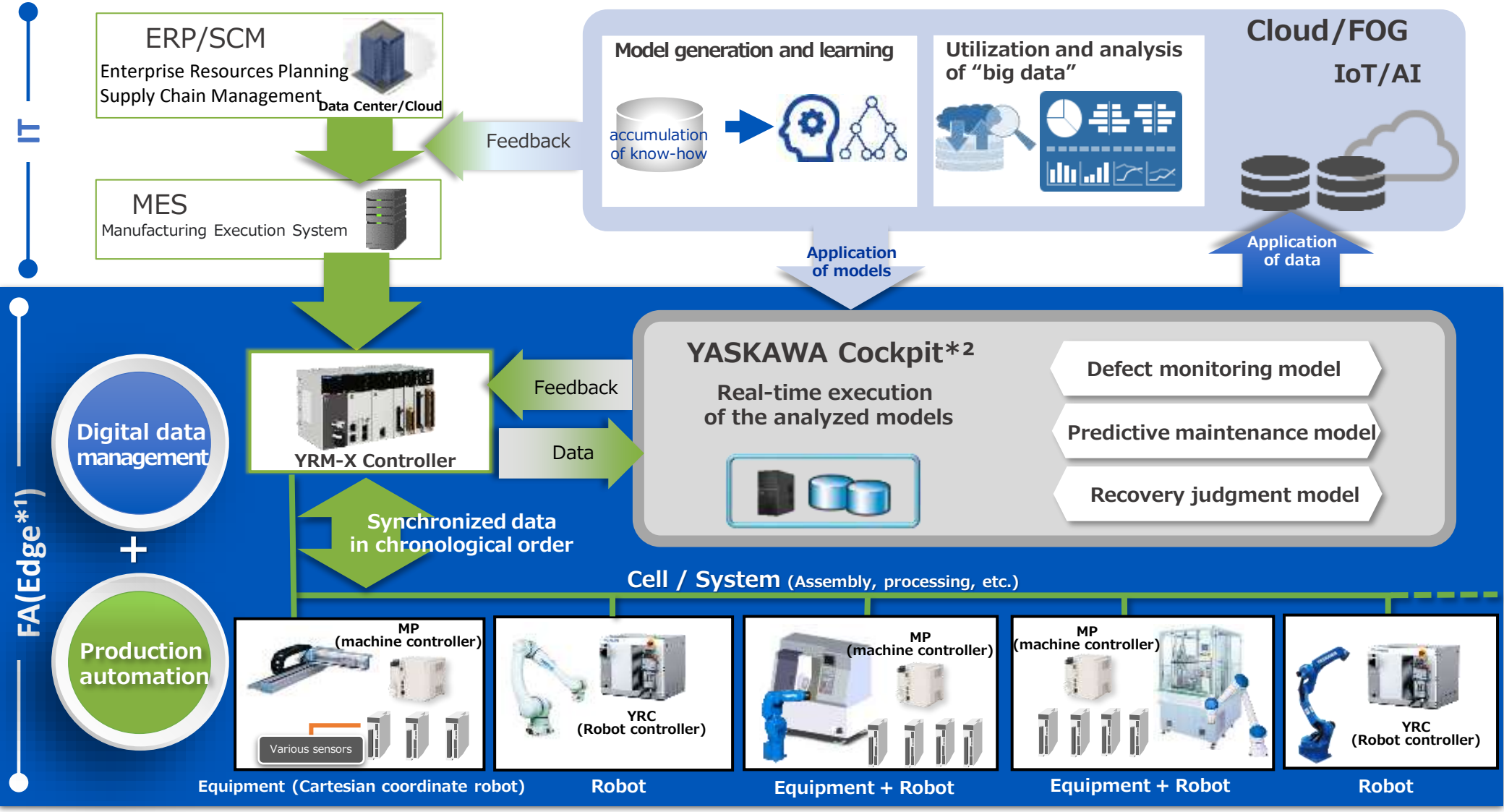
We add digital data management to our automation solutions and contribute to solve business issues from the manufacturing field together with our customers by using i³-Mechatronics.

FA Solution

Motion& Data

Data Solution

Factory where i³-Mechatronics is realized



*1: Edge is an information processing field for data analysis and feedback that require real-time performance at production sites or factories.
*2: A software that able to collect, store, and analyze real-time data on equipment and devices at production sites.

YASKAWA