

**Security code: 6841**

**Yokogawa Electric Corporation**

# **Investor's Guide**

1. Corporate profile P2~
2. Mid-term business plan Accelerate Growth 2023 P23~
3. ESG Management P41~
4. Appendix P45~

From FY21, as a result of revising the Group's internal management classification, the life innovation business that was previously included in the test and measurement business segment has been reclassified into the industrial automation and control business segment. In addition, the name of the reportable segment previously known as the test and measurement business has been changed to the measuring instruments business. Moreover, segment information for FY20 has been presented based on the changed classification.

# Corporate Data

<b>Company name:</b>	<b>Yokogawa Electric Corporation</b>
<b>Founded:</b>	<b>September 1, 1915</b>
<b>Capital stock:</b>	<b>43.4 billion Yen</b>
<b>President and Chief Executive Officer:</b>	<b>Hitoshi Nara</b>
<b>Net sales:</b>	<b>456.5 billion Yen (Overseas sales ratio:72.8%)</b>
<b>Operating income:</b>	<b>44.4 billion Yen</b>
<b>Net income:</b>	<b>38.9 billion Yen</b>
<b>R&amp;D expenses/sales ratio:</b>	<b>6.7%</b>
<b>Number of employees:</b>	<b>17,084 (Outside Japan 10,966 Japan 6,118)</b>
<b>Shareholder equity ratio:</b>	<b>61.4%</b>
<b>Dividend:</b>	<b>34 Yen (Dividend per share)</b>
<b>Market cap:</b>	<b>707.0 billion Yen * May 31, 2023</b>



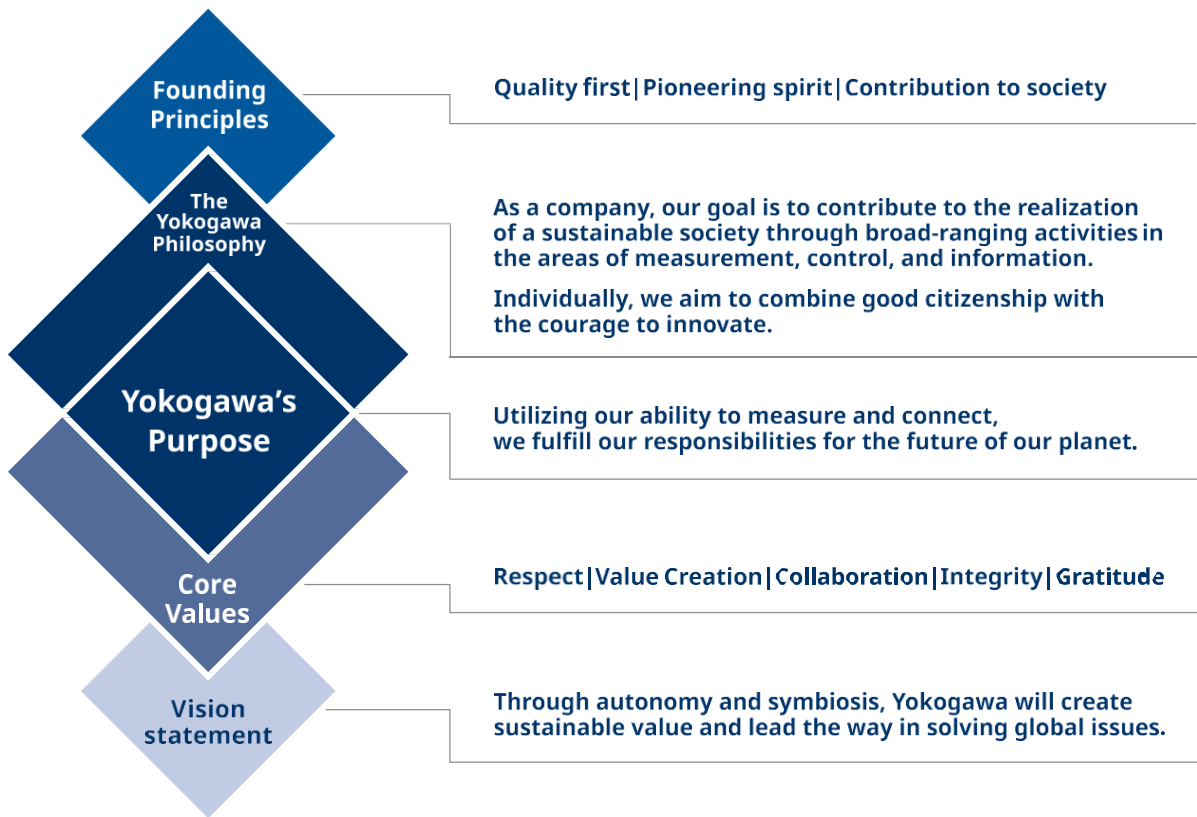
Hitoshi Nara



Corporate Headquarters

※As of March 31, 2023

# Yokogawa Group Identity



**Founder**  
**Dr. Tamisuke Yokogawa**



**Utilizing our ability to measure and connect,  
we fulfill our responsibilities for the future of  
our planet.**

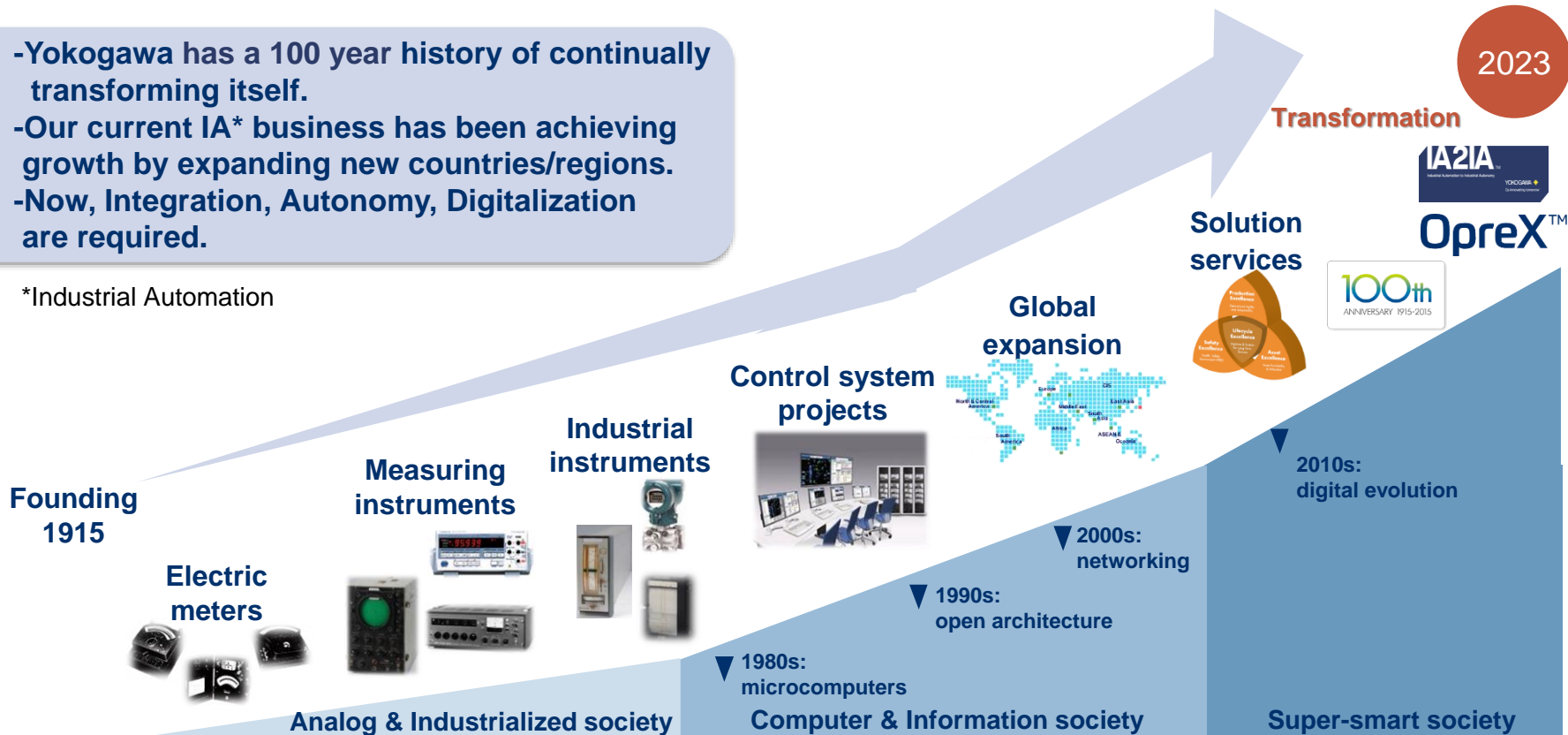
*Measuring* represents Yokogawa's origin as a company. We measure things, grasp and analyze their state, and add value through the information that is derived. *Connecting* refers to how Yokogawa not only combines valuable information, but also builds trusted relationships with customers in various industries and brings together businesses and industries, giving resonance to the value that we create.

*Our ability to measure and connect* is a core competence that Yokogawa must never lose. We wish to use this strength to find solutions to various social issues and create a future where humanity and planet Earth can co-exist in symbiotic harmony. This aspiration is expressed in our commitment to *fulfill our responsibilities for the future of our planet.*

# History of Yokogawa

- Yokogawa has a 100 year history of continually transforming itself.
- Our current IA\* business has been achieving growth by expanding new countries/regions.
- Now, Integration, Autonomy, Digitalization are required.

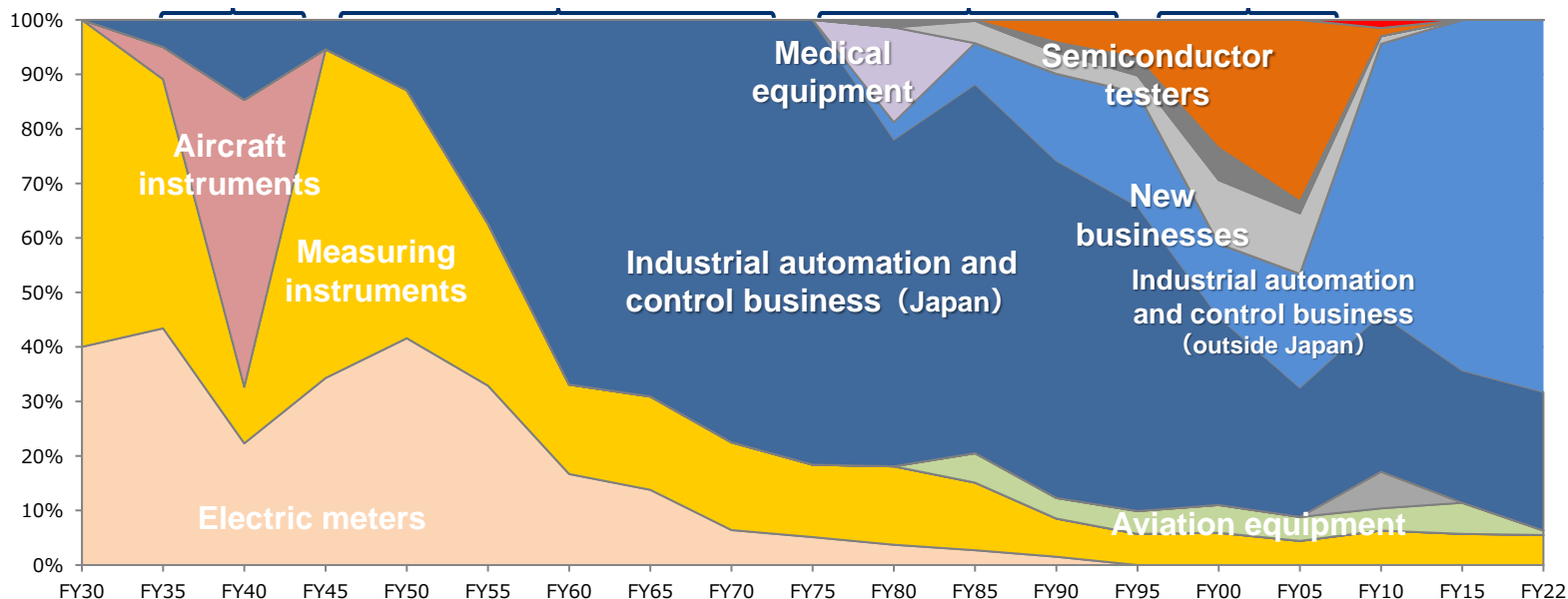
\*Industrial Automation



# Change in Composition of Business 1930 ~ 2023

IA(Japan): With expanding the industry coverage, aiming for high added value such as consulting.

IA(outside Japan): Covering most regions, and focusing on efficiency and sustainable growth.



## Global network supporting business growth

### Business sites

**60** countries

### Subsidiaries and affiliates

**13** in Japan

**115** outside Japan

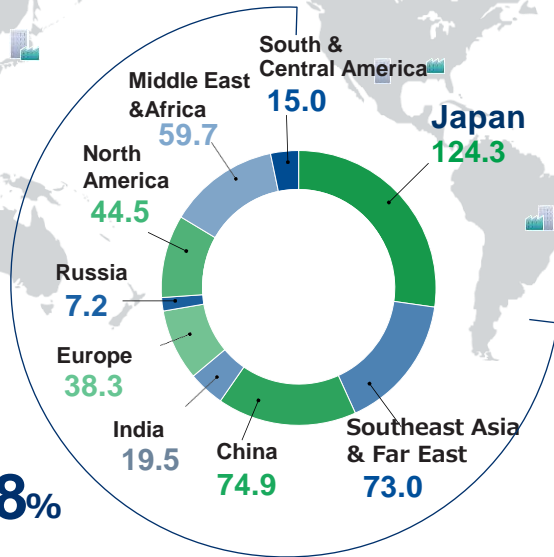
\*Includes branches and representative offices

### Manufacturing sites

**12** countries

### Net sales by region (Billion yen)

Outside Japan **72.8%**



### Service network

Countries and sites served

**200+**

Service sites

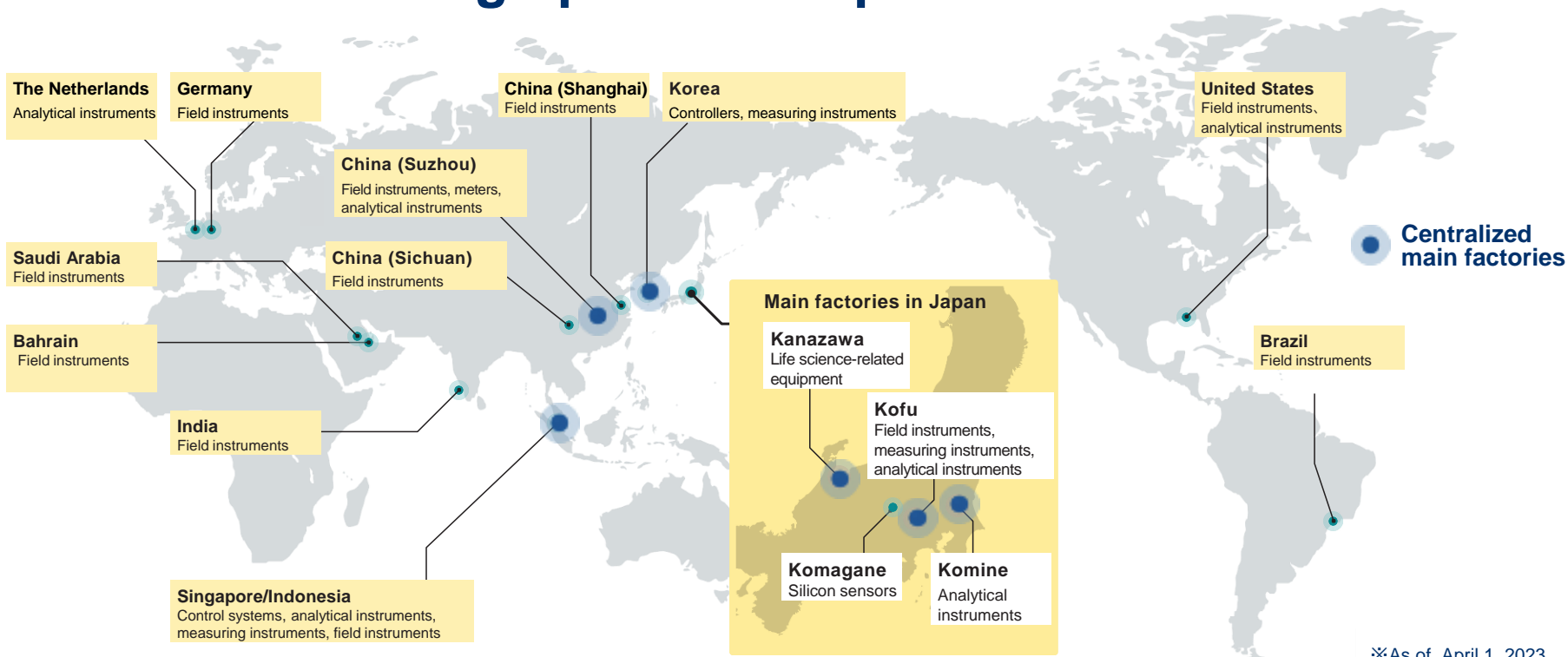
**180+**

Service engineers

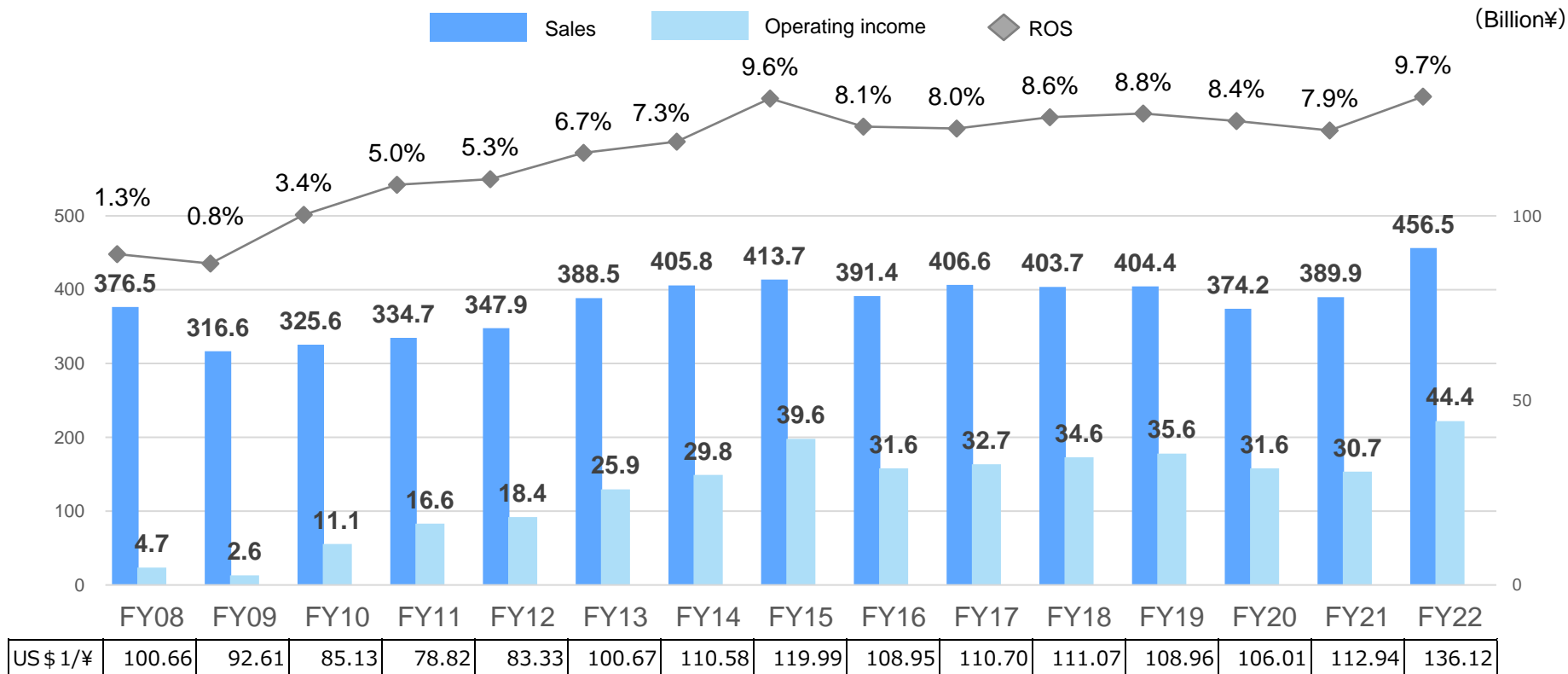
**2,500+**

※As of March 31, 2023

## Our manufacturing operations span 12 countries

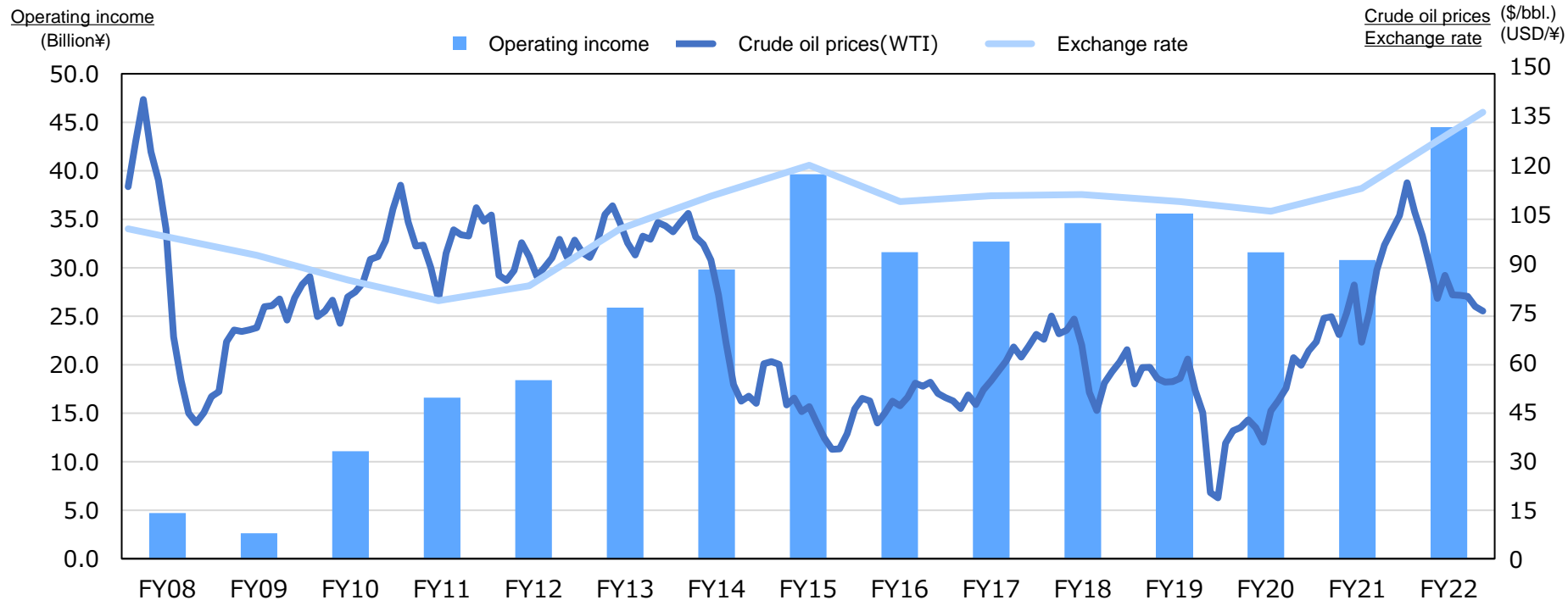


# Sales / Operating income



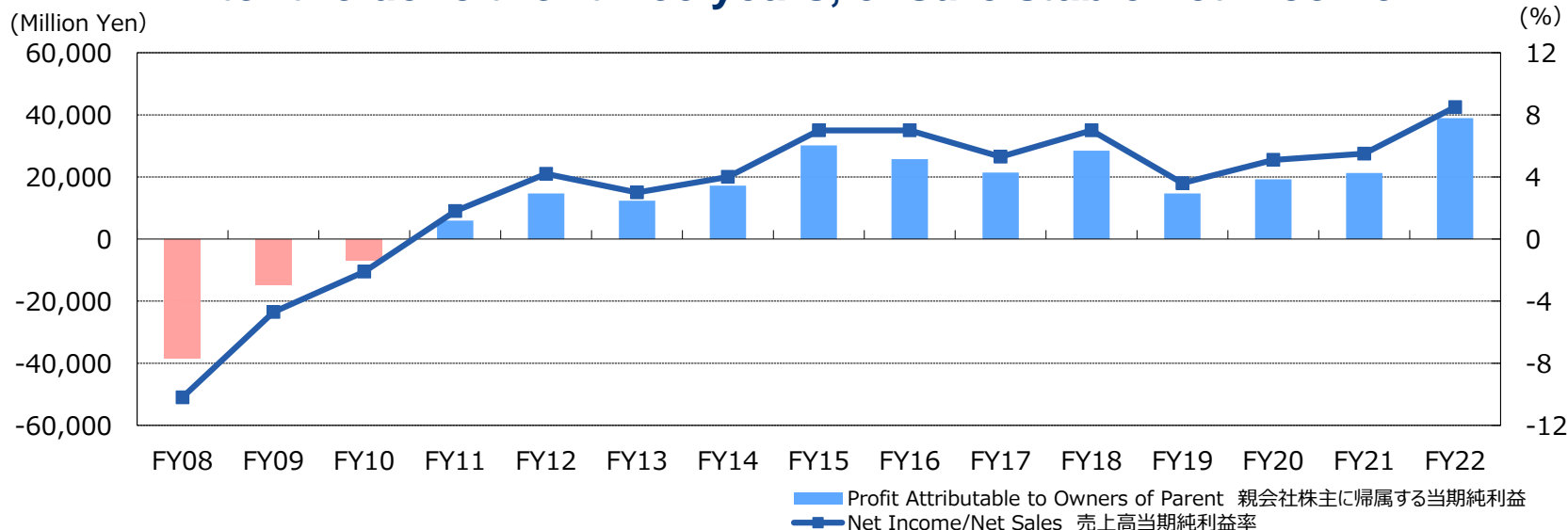
# A company that is profitable regardless of what happens in the external environment (more resilient)

## Our business is resilient to the effect of the external environment (oil prices, exchange rates)



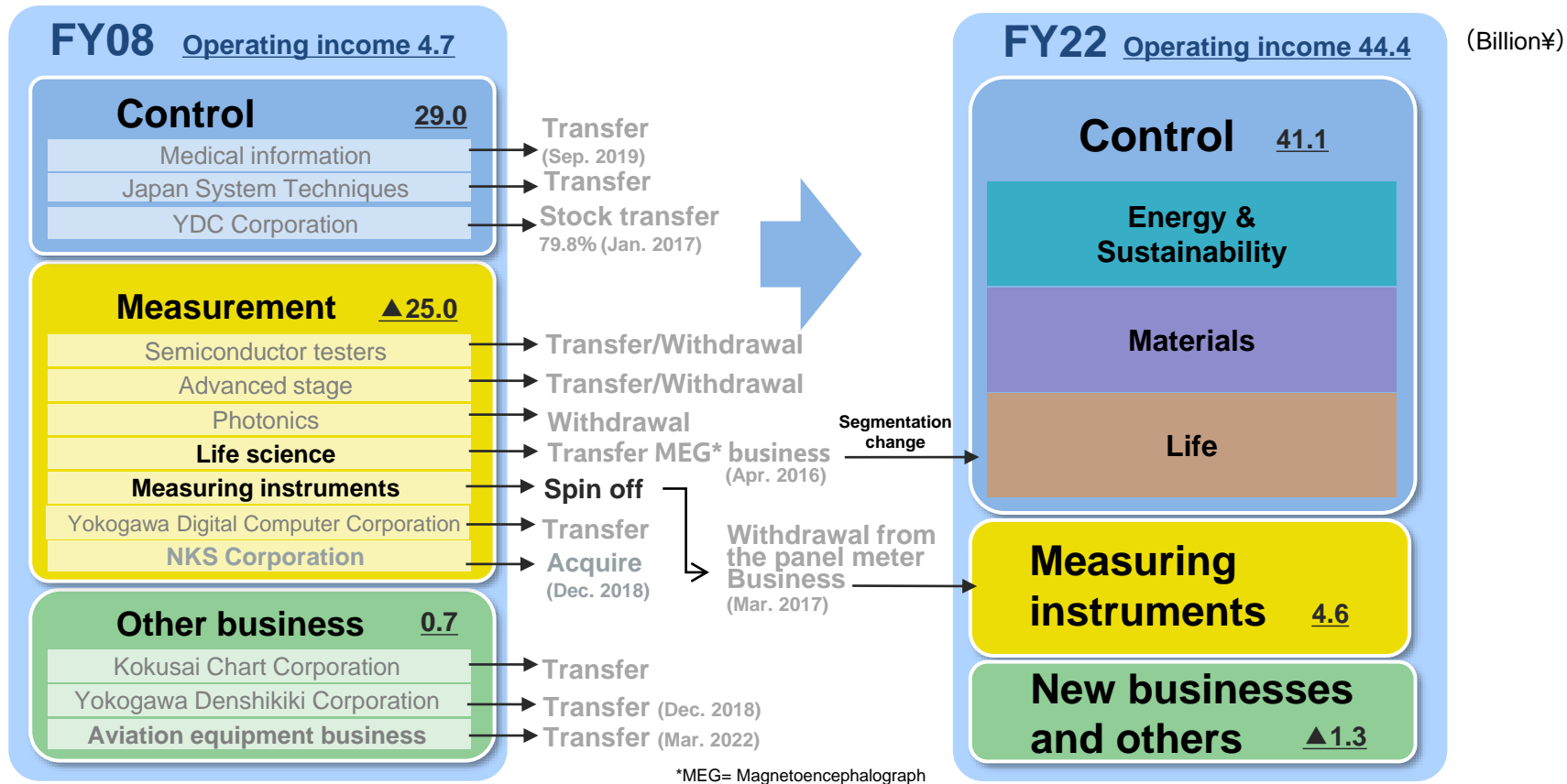
# Trend of Profit Attributable to Owners of Parent

After the deficit for three years, ensure stable net income



	FY08	FY09	FY10	FY11	FY12	FY13	FY14	FY15	FY16	FY17	FY18	FY19	FY20	FY21	FY22
Sales 売上高 (Million Yen)	376,534	316,606	325,620	334,671	347,899	388,463	405,792	413,732	391,433	406,590	403,711	404,432	374,206	389,901	456,479
Income before Tax 税引前当期利益 (Million Yen)	-9,400	-10,693	-1,025	11,672	20,496	21,750	27,426	41,936	35,523	29,381	38,428	25,759	31,524	30,092	49,799
Profit Attributable to Owners of Parent 親会社株主に帰属する当期純利益 (Million Yen)	-38,446	-14,799	-6,692	5,952	14,688	12,341	17,223	30,161	25,759	21,449	28,446	14,686	19,219	21,267	38,920
Profit Attributable to Owners of Parent / Sales 売上高 親会社株主に帰属する当期純利益率 (%)	-10.2	-4.7	-2.1	1.8	4.2	3.2	4.2	7.3	6.6	5.3	7.0	3.6	5.1	5.5	8.5

# Reform of Business Structure (FY08-FY22)



# Sales by Segments

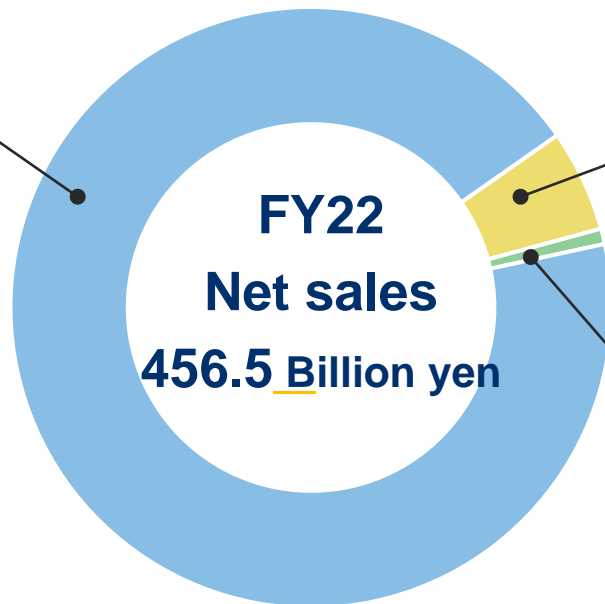
**Control 93.7%**



**Measuring instruments 5.5%**



**New businesses and others 0.8%**



# Business segments

## Control

### Energy & Sustainability

- Oil & gas
- Petrochemicals
- Renewable energy
- Electric power
- EMS
- Energy storage

42.6%

### Materials

- Functional chemicals
- Biomass materials
- Pulp & paper
- Textiles
- Steel
- Non-ferrous metals
- Mining
- Mobility
- Electrical/electronics

39.0%

### Life

- Pharmaceuticals
- Healthcare
- Food
- Water

12.0%

Control sales ratio    Total 93.7%

## Measuring instruments

- Energy
- Info-comm
- Healthcare

5.5%

## New businesses and others

- amnimo
- Biotechnology-related business

0.8%

## Process automation (PA)

Products produced by reacting raw materials (mainly fluids such as liquids and gases)

### Flow process

mass production  
react the fluid continuously



Oil, LNG(liquefaction,regasification )  
Petrochemical, Refinery

### Batch process

Manufacturing process for a small number of many products, produced by same equipment and facilities.



Chemical, Bulk chemical, Specialty chemical

Power, Pharma, Food,Iron & Steel, Paper

## Factory automation (FA)

Products manufactured using machine tools, robots, etc., through processes such as processing and assembly



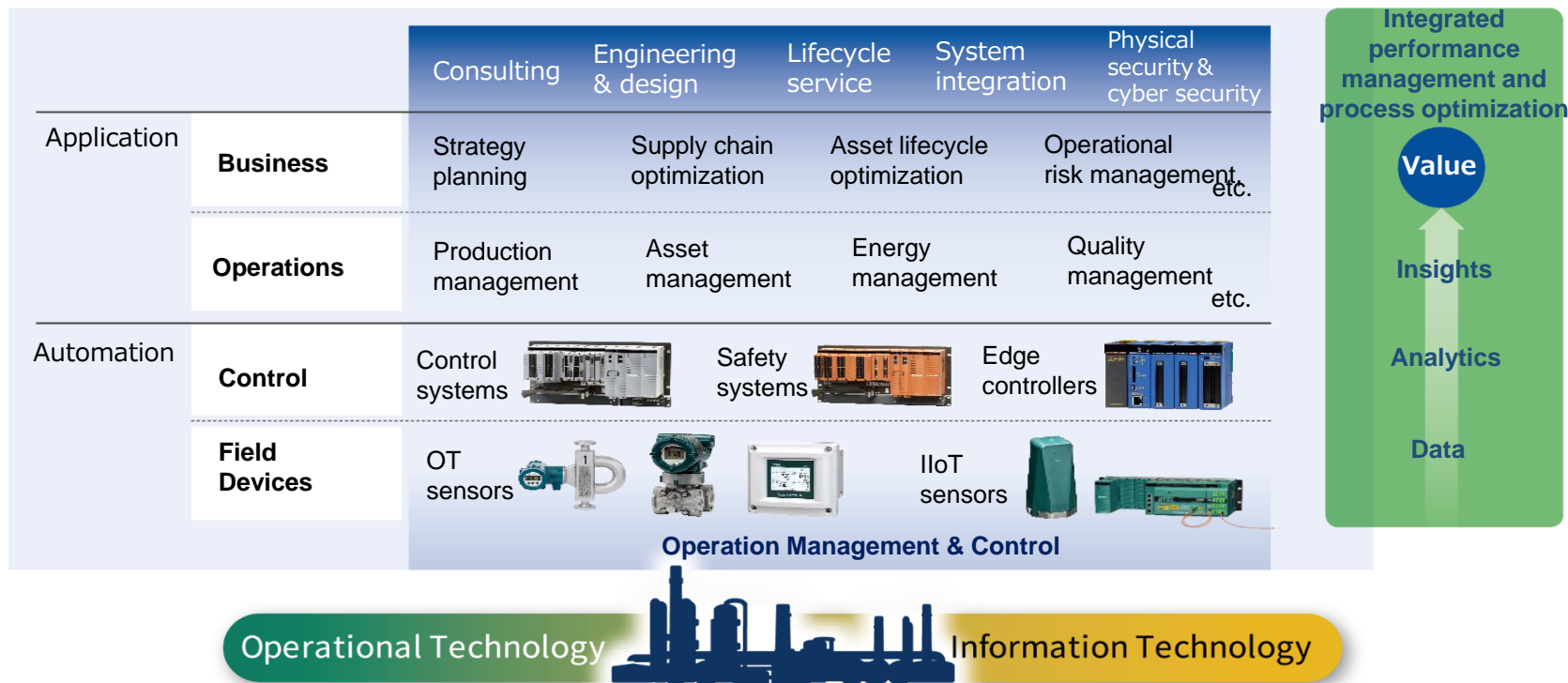
Semiconductor

Automobile, Electrical

Source: Role and Expectations of Innovation in raw material's Industry January 2018 Industry Division, raw material, the Ministry of Economy, Trade and Industry

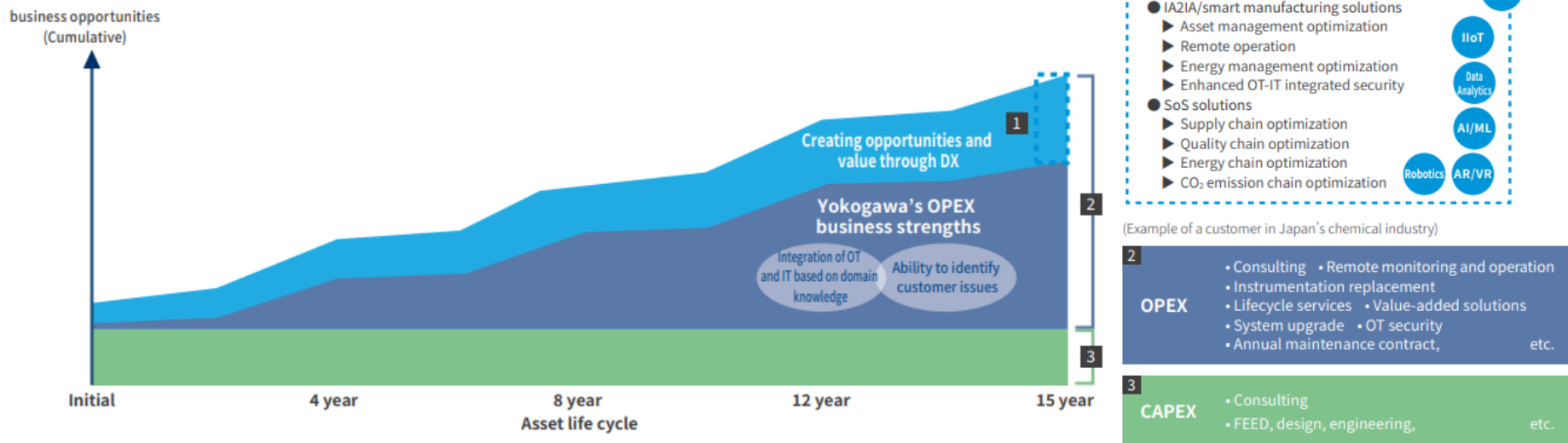
# Solution Portfolio in Control Segment

## From “Automation Supplier” to “Trusted Partner”



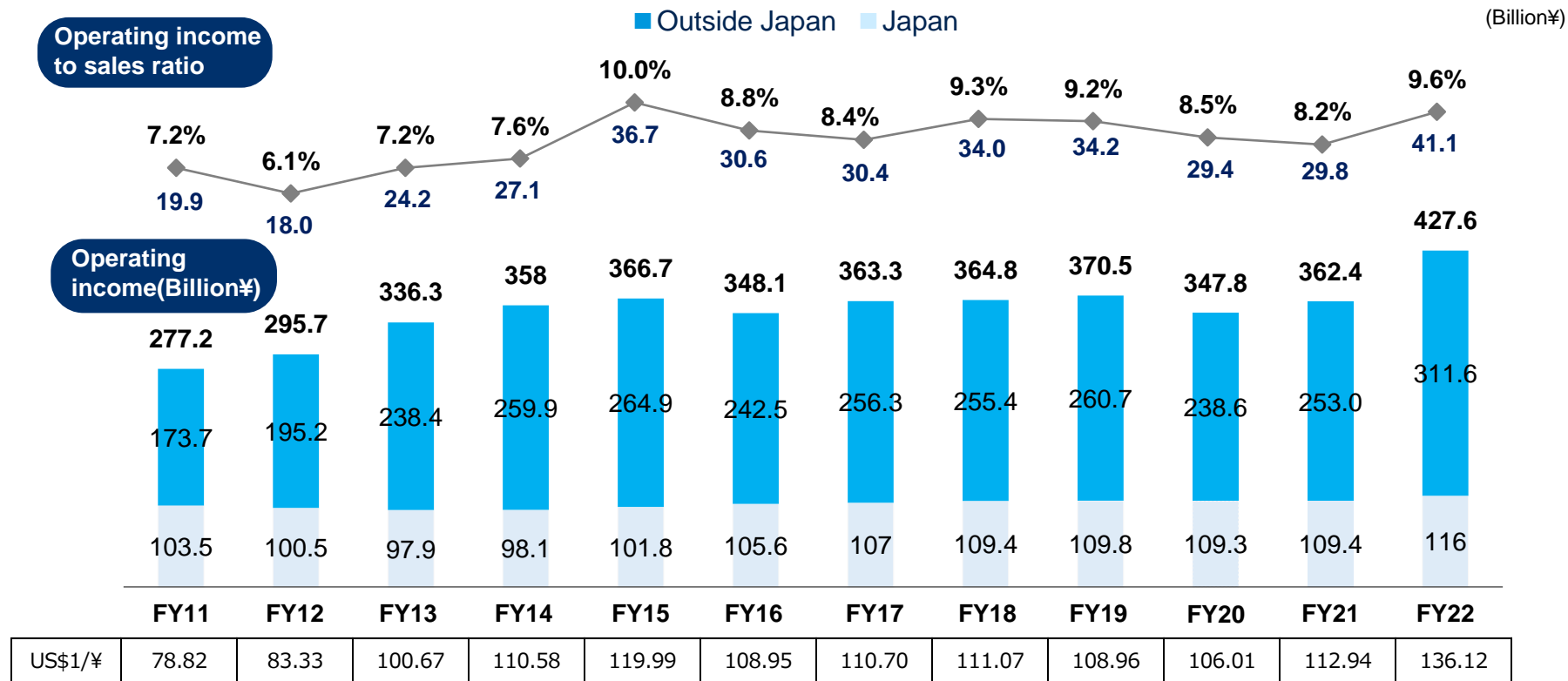
## Sustainable growth by balancing CAPEX and OPEX business

- The CAPEX business fluctuates by market trend and customer situation.  
On the other hand, OPEX business which is cumulative business is relatively stable.
- To get CPAEX business is also important to acquire of the installed base.



Over entire facility lifecycle, continue to provide support and propose solutions that capitalize on Yokogawa's strengths.

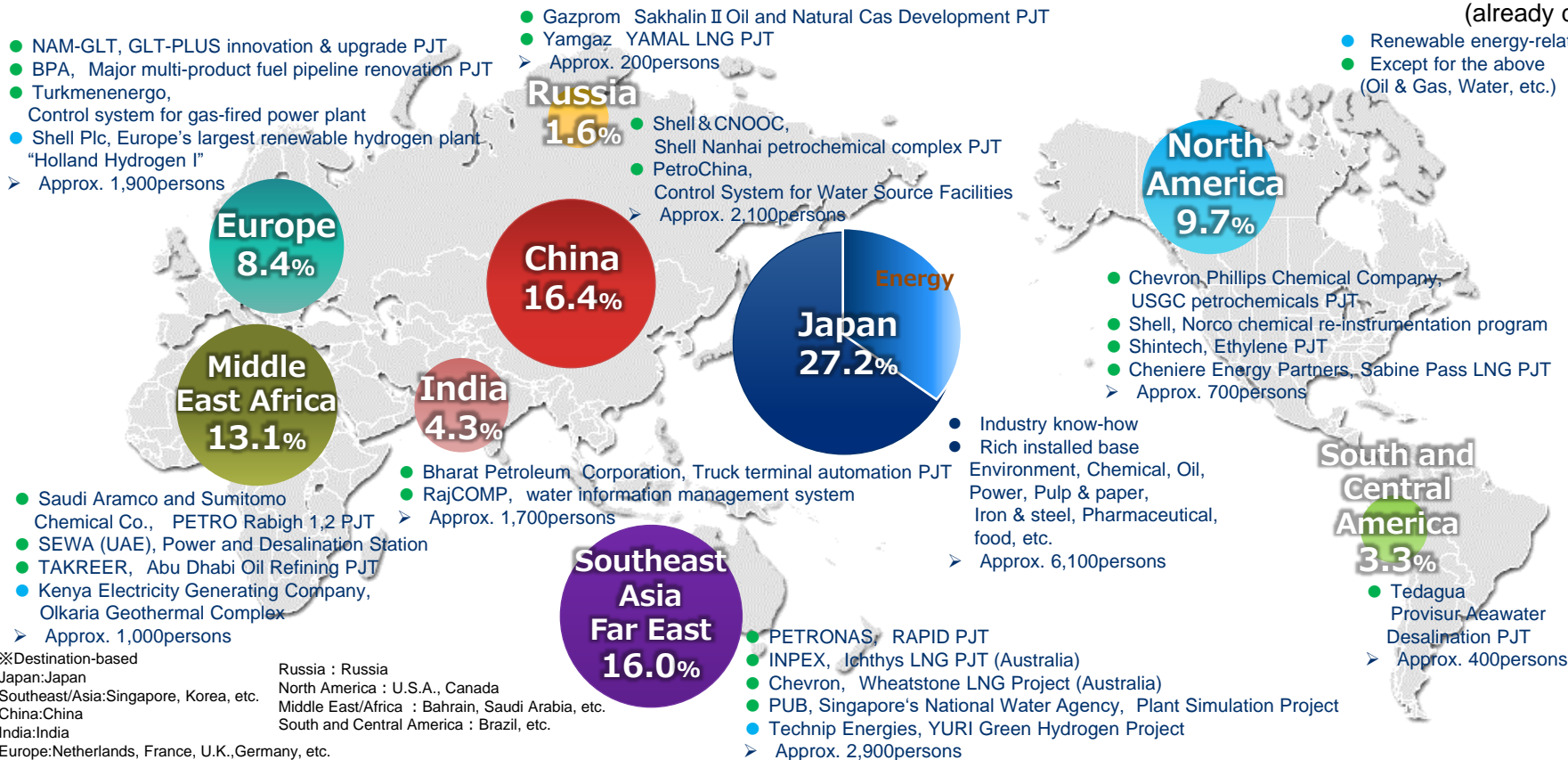
# Trend of Global Sales in Control Segment



# Sales ratio by region (※)・Major projects・Number of employees

(already disclosed)

- Renewable energy-related business
- Except for the above (Oil & Gas, Water, etc.)



# Major Industries & Orders Breakdown

※As of March 31, 2023

**FY22 Control Orders: 485.4 billion yen**  
(FY21 Control orders: 391.1 billion yen)

## Others

Iron & Steel, Paper, LNG(carriers) etc

## Water



Water treatment, etc.

## Pharma/Food

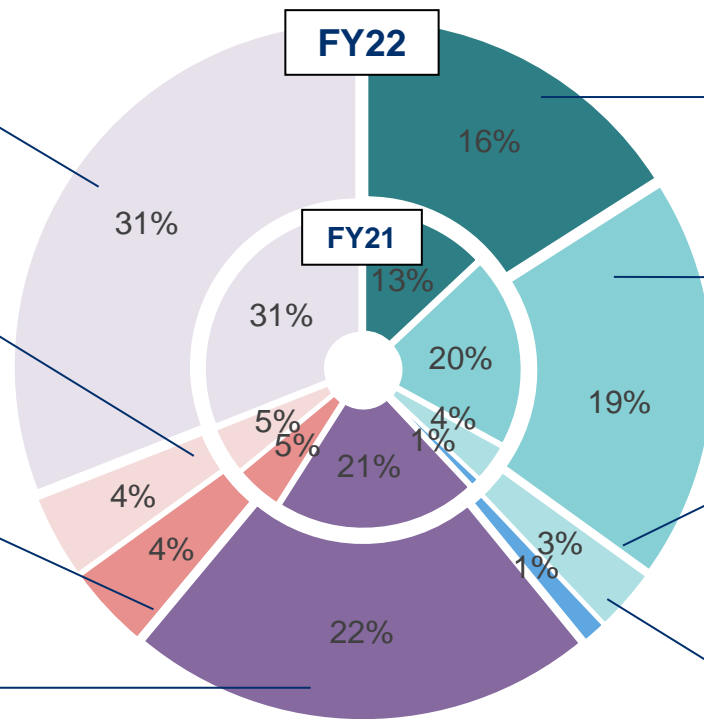


Pharma, Food, etc.

## Chemical



Bulk chemical, Specialty chemical, etc.



## Upstream



Oil, LNG(liquefaction), etc.

## Downstream



Petrochemical, Refinery  
LNG(regasification), etc.

## Power



Power generation, etc.

## Renewable Energy



Renewable energy, etc.

# LNG Business

We are expanding our OPEX business such as improvement of safety and productivity solution, equipment monitoring solution in after-sales phase, in the whole value chains of liquefaction, LNG transport, gasification, storage, and delivery processes.



## LNG Liquefaction



Liquefaction  
**77**  
Trains

## LNG Transportation



LNG Carrier  
**99**  
Vessels

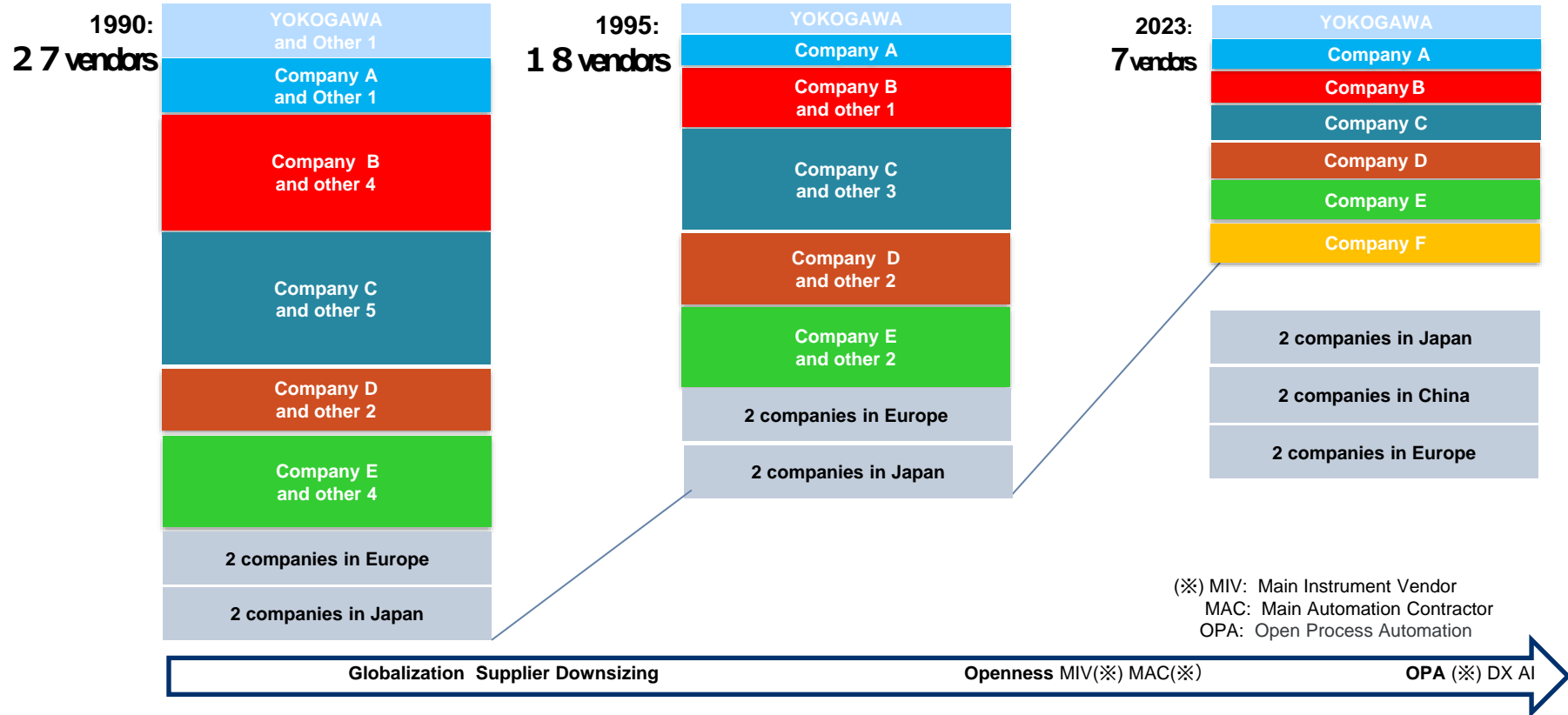
## LNG Regasification

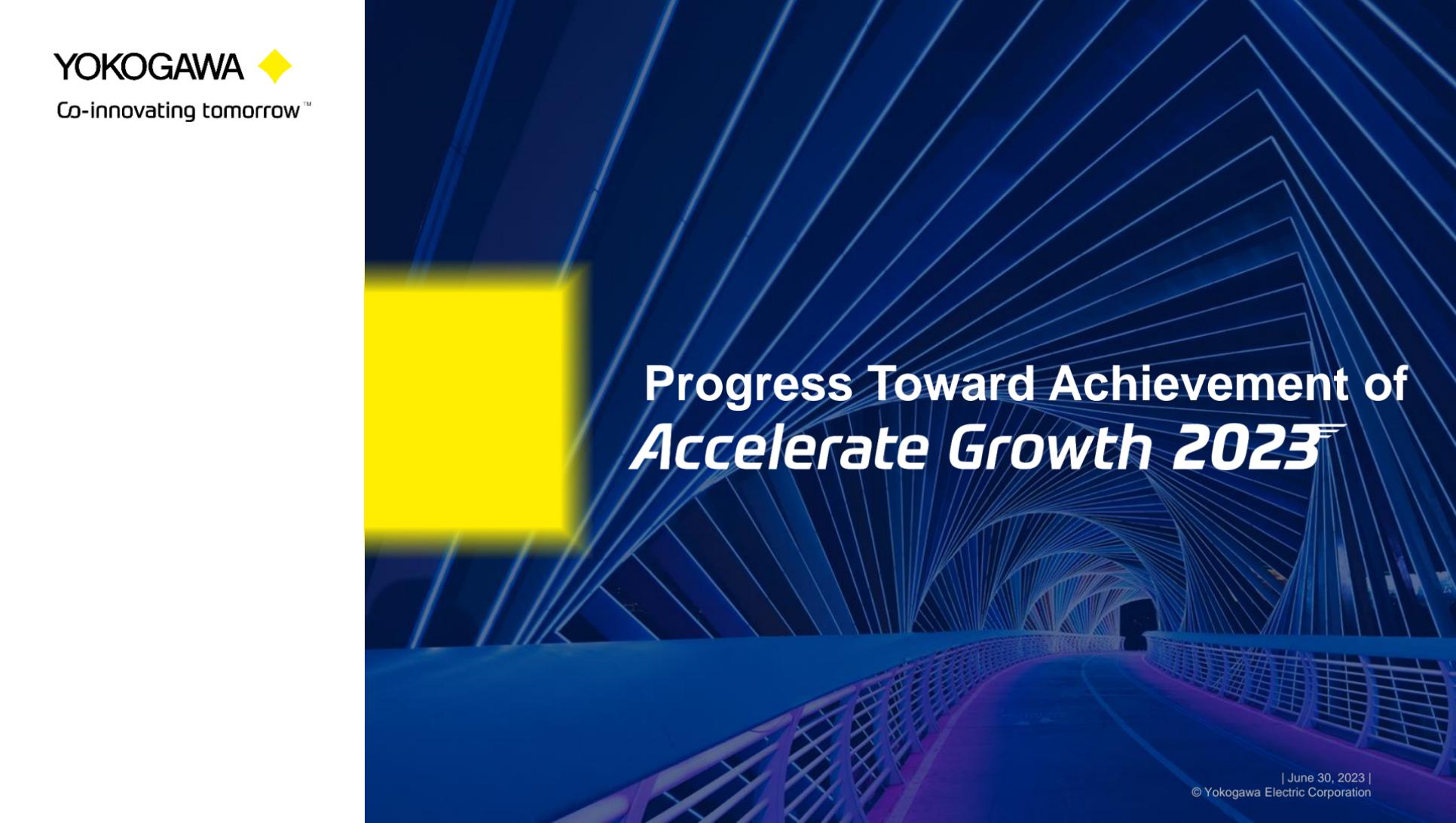


Regasification  
**55**  
Terminals

\*at the end of March 2023 (Company data)  
Change some aggregation methods

# Shake out of industries





**Progress Toward Achievement of**  
***Accelerate Growth 2023***

# Business Environment Megatrends and Customer/Industry Trends

In an extremely uncertain and rapidly changing business environment, customers are accelerating their transformation.



## Customer trends

- Shift to renewable energy (mainly energy-related companies)
- Shift to production of environmentally friendly products
- Growing need for workforce reduction/unmanned operations, progress with digital transformation (DX)
- Accelerating low-carbon investment
- Efficient, sophisticated, and fast R&D

## Process automation industry trends

- Maturing product markets, hardware commoditization
- Growing software and sensor markets
- Spread of new business models
- Competition with IT companies
- Threat of cyberattacks

# Overview of Long-term Business Framework and Mid-term Business Plan

2021

2023

2023

2030

2050

## Yokogawa's Purpose / The Yokogawa Philosophy

### Three goals for sustainability

Net-zero  
Emissions

Well-being

Circular  
Economy

### Long-term business framework (including Vision statement)

Aim for growth through the provision of shared value to society

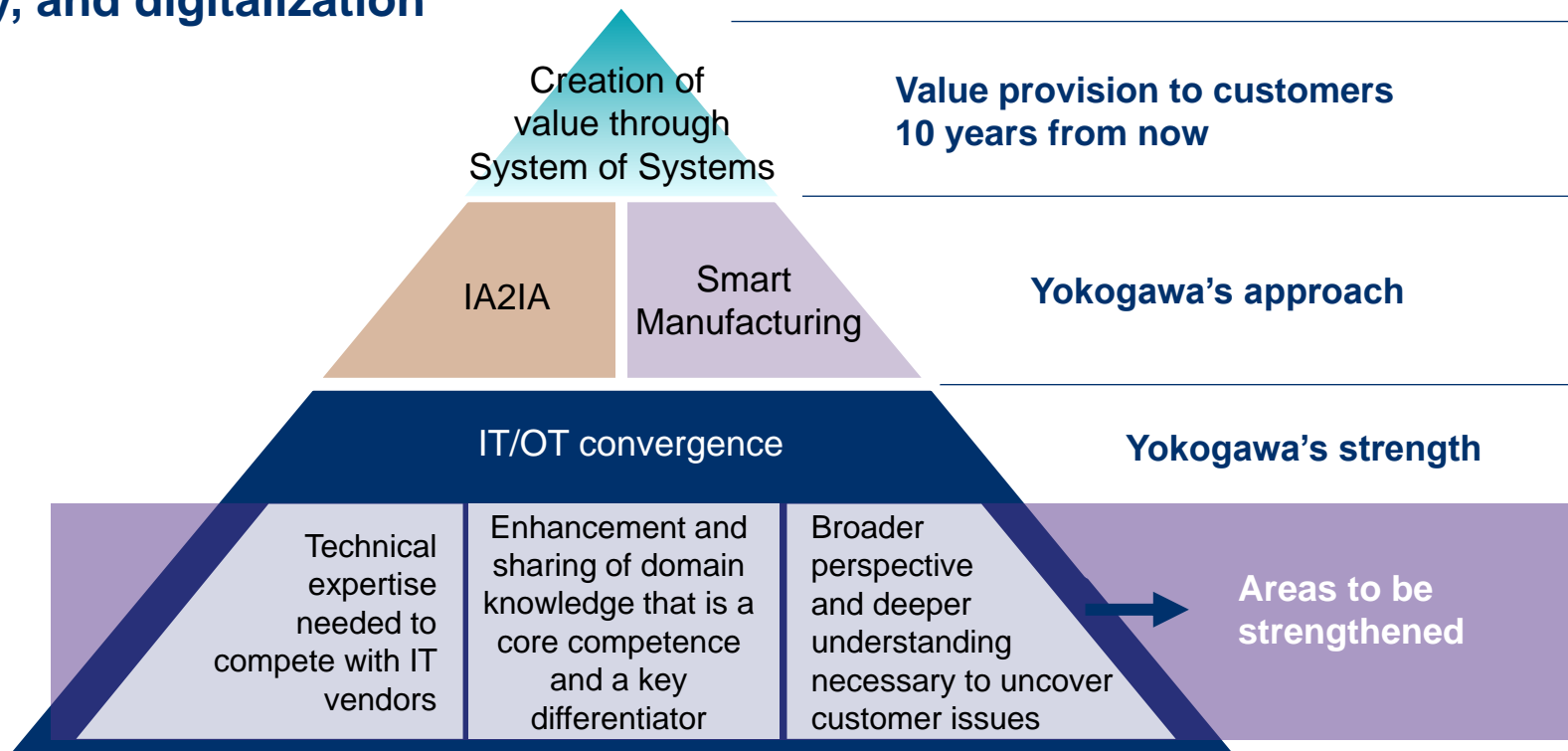
### Mid-term business plan *Accelerate Growth 2023*

Establish a business structure centered on addressing broad social issues to enable growth

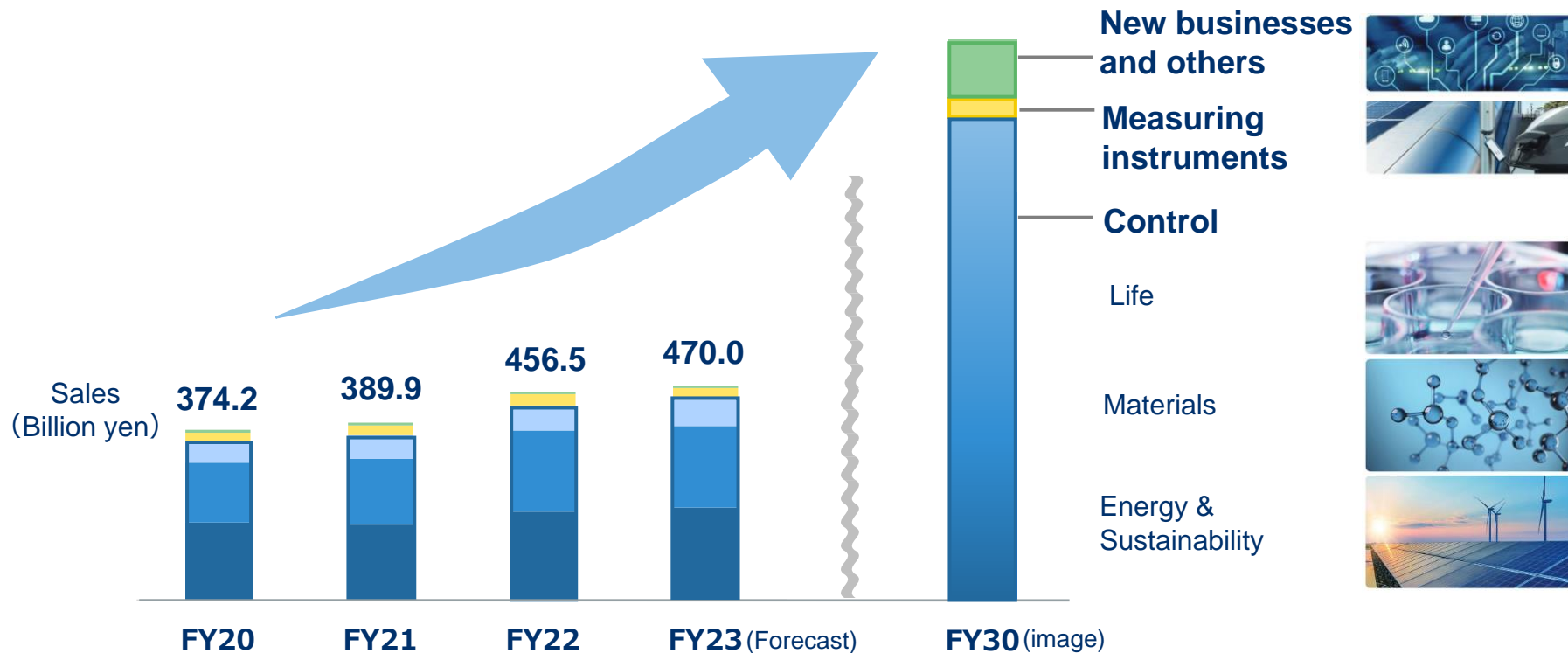
### Mid-term business plan (From FY24, with roughly 3-year perspective)

# Value Provision through System of Systems (SoS)

The creation of value through overall optimization driven by integration, autonomy, and digitalization



## Aiming for strong business growth toward FY30



# Accelerate Growth 2023: 4 basic strategies



# AG2023 Management Indicators

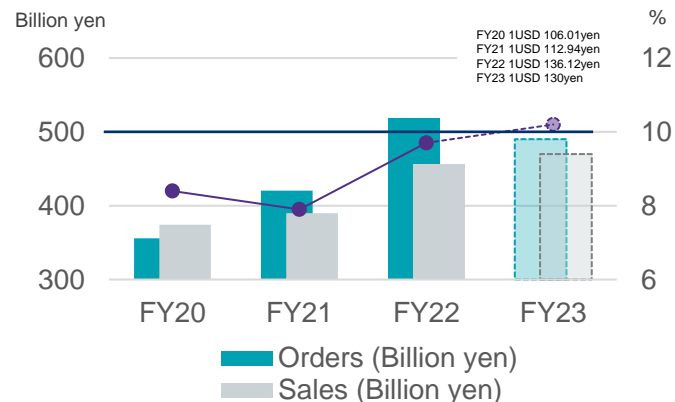
Although we faced a challenging business environment that has included repeated waves of COVID-19 outbreaks, the conflict in Ukraine, tight supply of semiconductors and other parts for production as well as goods for projects, energy cost increases, and inflation,

**We achieved growing both sales and earnings in FY22.**

**To achieve our goals,**

**We will continue to do our best in the final year of the AG2023 plan**

	AG2023 Target	FY22 Results	FY23 Forecast
Order growth	8 ~ 10% per year *FY20 to FY23	20.7% per year *FY20 to FY22	11.3% per year *FY20 to FY23
Sales growth	4 ~ 6% per year *FY20 to FY23	10.5% per year *FY20 to FY22	7.9% per year *FY20 to FY23
ROS	10% (FY23)	9.7%	10.2%
EPS growth	16 ~ 18% per year *FY20 to FY23	42.3% per year *FY20 to FY22	31.8% per year ** *FY20 to FY23
ROE	10% (FY23)	10.9%	11.1% **
Operating cash flow	¥140B or more (3 years cumulative)	¥92B (2 years cumulative)	¥140B (3 years cumulative)
	AG2023 exchange rate (1USD): 105 yen	FY22 average exchange rate (1USD): 136.12yen	FY23 forecast exchange rate (1USD): 130yen



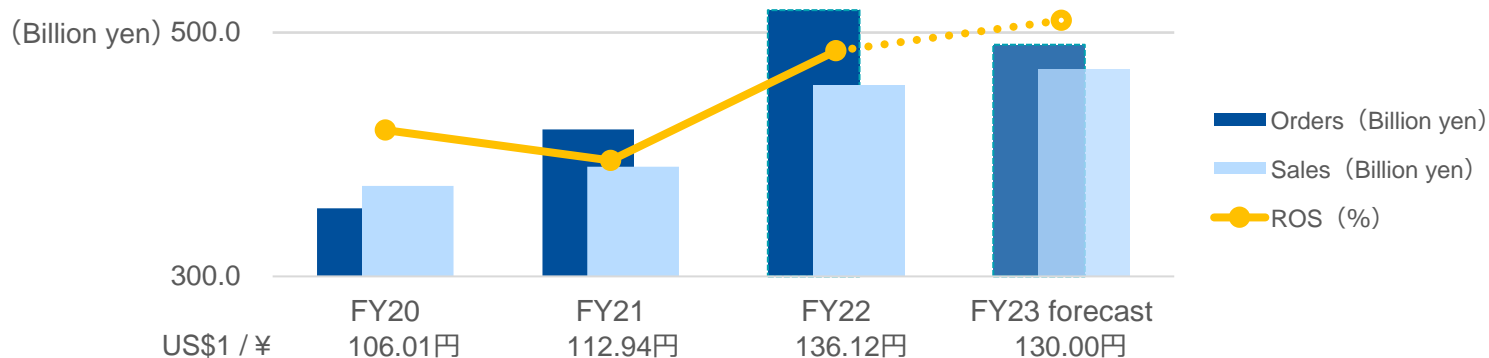
\* The Company has resolved to acquire of own shares.

"EPS growth and ROE" in the FY23 forecast does not consider the impact of the acquisition of own shares. Therefore, it may change depending on the status of future acquisition of own shares.

For information on the acquisition of own shares, please refer to page 17 of the financial results briefing material "Financial Results for the Fiscal Year 2022".

# FY23 Forecast

	FY20	FY21	FY22	FY23 forecast	Growth rate	(Billion yen)
Orders	355.8	420.5	518.4	490.0	▲5.5%	
Sales	374.2	389.9	456.5	470.0	+3.0%	
Operating Income	31.6	30.7	44.4	48.0	+8.1%	
ROS(%)	8.4%	7.9%	9.7%	10.2%	—	
Profit attributable to owners of parent	19.2	21.3	38.9	44.0	+13.1%	
EPS(¥)	72.00	79.73	145.81	164.84	—	



# Control Subsegment Growth

## Steady growth by expanding opportunities through industry-wide collaboration Aiming to achieve FY23 forecast and further growth

### Focus Activities

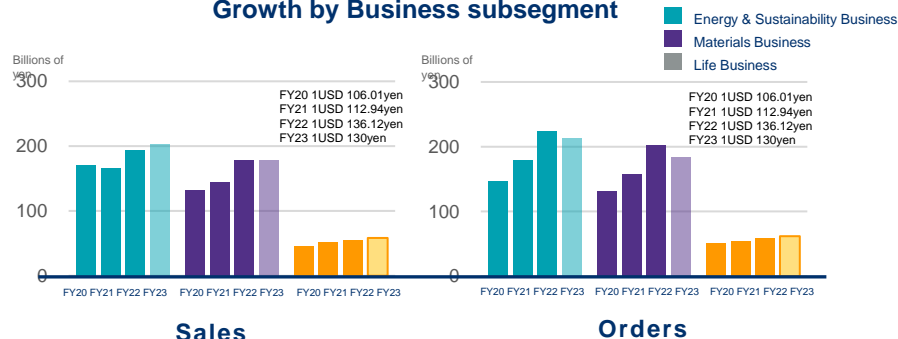
- Energy & Sustainability : Comprehending customers' energy transition and carbon neutrality needs and expanding our business through co-creation with them
- Materials : The ability to co-innovate solutions is constantly improving, leading to business growth.
- Life : Steady growth by building business infrastructure and enhancing collaboration. Increased inquiries from overseas

	Sales growth *2			(Reference) Order growth *2		
	CAGR (FY20-22)		CAGR (FY20-FY23)	CAGR (FY20-22)	CAGR (FY20-FY23)	
	Actual	Forecast *1	AG2023 Target	Actual	Forecast *1	AG2023 Target
Energy & Sustainability Business	6.8% (▲1.6%)	6.1% (0.9%)	4% or more	23.9% (14.3%)	13.3% (7.8%)	9% or more
Materials business	16.4% (9.6%)	10.8% (7.4%)	3% or more	23.9% (16.9%)	11.6% (8.1%)	6% or more
Life Business	9.7% (6.0%)	8.3% (6.5%)	16% or more	7.2% (4.0%)	6.4% (4.8%)	16% or more

\*1: FY23 Earnings Forecast Achieved

\*2: Figures in parentheses are organic growth excluding foreign exchange

### Growth by Business subsegment



# Accelerate Growth 2023 Review of Four Basic Strategies

1

## Implement IA2IA & Smart manufacturing and transform value provision

Expansion of value provided

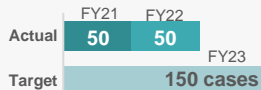
- Move IA2IA concept to the implementation phase
- Expand the scope of smart manufacturing solutions provided for customers

- ✓ Expansion of value provision is taking form, actual results are being achieved, and external expectations are rising.
- ✓ Accelerating the scaling up of business is a challenge.

### Outcomes

#### ◆ Steady progress in IA2IA/smart manufacturing business development initiatives

- Number of new solutions released by IA2IA/smart manufacturing business



- Number of orders received for IA2IA/smart manufacturing business  
Number of orders **remained steady**  
Size of individual orders showed an upward trend.

FY21 results: 195  
FY22 results: 160

#### ◆ Increasing number of projects involving integrated operations and inter-system integration, with broad proposition of value

- Increase in number of orders for MAC/MAIC\*1 projects requiring high-level project execution and integration capabilities
- Ongoing Inter-Industry Collaboration Study Project for the Realization of a Carbon-Neutral Industrial Complex
- FKDPP \*2, an autonomous control AI algorithm, took the highest honor in the Japan Industrial Technology Awards

\*1 Main automation contractor / Main automation and information contractor

\*2 Factorial Kernel Dynamic Policy Programming

### Challenges and Activities

Establish recurring/subscription and other new business models and accelerate scaling up of business

- Strengthen the quality and quantity of human resources to promote DX and IT/OT convergence to customers.  
Example) Employees acquired S.I.R.I.\*3 certification for promotion of business\*4
- Develop solution providers and nurture solution provider mindset  
Example) Establishment of global training center in Singapore\*4
- Strengthen communication and KPI monitoring with regional offices
- Accelerate Yokogawa Digital Corporation's business by responding to the many inquiries that it receives

\*3 The Smart Industry Readiness Index was created by the Singapore Economic Development Board in partnership with a network of leading technology companies, consultancy firms, industries, and academics. It assesses the digital readiness level based on the three core elements of Industry 4.0: Process, Technology, and Organization.

\*4 For more information, see slide#12 Optimize internal operations and transform mindsets.



# AI Solutions for Industrial Autonomy (IA2IA)

## Leading the way forward with AI solutions for industrial autonomy that contribute to customers' ESG and sustainability efforts

In a field test, an autonomous control AI stably operated in a distillation column at an ENEOS Materials' chemical plant for one year, a great step toward commercialization.

Stable  
operation

Reduced  
environmental  
impact

Quality &  
cost reduction

Lightened  
workload &  
improved safety



- **Proprietary autonomous control AI FKDP**<sup>\*1</sup> technology has succeeded in controlling a process that previously could not be automated and had necessitated manual control.
- In comparison to manual control, steam consumption and CO<sub>2</sub> emissions<sup>\*2</sup> were reduced **approx. 40%**
- Achieved one year of continuous stable operation and **officially adopted** for use at customer site
- Launch of consulting services by Yokogawa Digital that utilize this knowledge and experience
- Received **the Prime Minister's Award** at this year's Japan Industrial Technology Awards



ENEOS Materials  
chemical plant



Awards ceremony \* 3  
(Credit: Nikkan Kogyo  
Shimbin)

<sup>\*1</sup> Factorial Kernel Dynamic Policy Programming

<sup>\*2</sup> In comparison to the amount of steam previously used to maintain the liquid level and the corresponding amount of CO<sub>2</sub> emissions

<sup>\*3</sup> From left: Vice Minister Yanagi of the Ministry of Education, Culture, Sports, Science and Technology; Yokogawa Electric Corporation President Nara; Yokogawa Digital Corporation President Kanokogi; Vice President Ota of Nara Institute of Science and Technology

### A wide range of Yokogawa AI Solutions

- ▶ AI plant operation support solution to learn and replicate operations performed by experienced operators [Yokogawa Solution Services/NTT Communications]
- ▶ An expanding portfolio of products, software, and platforms for a wide variety of industries

For details, please visit the Yokogawa website: [Industrial AI, Building Next-Gen Autonomous Operations | Yokogawa Electric Corporation](#)

# Accelerate Growth 2023 Review of Four Basic Strategies

2

## Strengthen industry responsiveness and expand cross-industry business

Expansion of value provided

- Provide new value to customers who are making the shift to being integrated energy companies
- Expand other industry and cross-industry business

- ✓ Materials business - Accelerate overseas growth through expansion of customer networks.
- ✓ Slight delay in growth of the Life Business. Establishing the strong foundation needed for growth of this business.

### Outcomes

#### ◆ Orders received in focus industries



#### ◆ M&A and alliances to grow focus industries

- Acquired Dublix, a provider of optimization technologies for waste-to-energy and biomass power plants
- Otsuka Chemical and Yokogawa Electric launched SynCrest Inc., a JV targeting the Contract Research, Development and Manufacturing Organization (CRDMO) business

#### ◆ Increased orders for hydrogen, ammonia, and renewable fuel projects that will contribute towards carbon neutrality

#### ◆ Increased orders for advanced water solutions (seawater desalination and reclaimed water)

### Challenges and Activities

Growth of the Life business, particularly in overseas markets

- Taking advantage of our Japan market expertise, building a strong foundation for the existing pharma, food, and water businesses and accelerating growth overseas
- Pursuit of M&A deals and alliances, particularly in the life science and pharma fields, to strengthen our business platforms and portfolio

Examples) Upskilling overseas personnel at Global Training Center

Strengthen support from Japan for overseas operations (caravan activities, etc.)

More customer demonstrations (building of special sites, organizational strengthening)

Use of digital marketing (webinars, etc.)

# Accelerate Growth 2023 Review of Four Basic Strategies

3

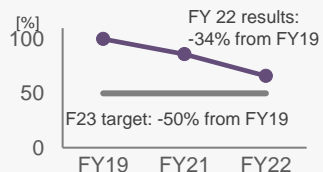
## Ensure profitability and sound growth

Profitability and growth in value provision

- Aggregate knowledge and improve efficiency with large projects
- Focus resources on product groups that deliver high value
- Generate profits from software and engineering

## Outcomes

- ◆ Improvement of efficiency in product development by shifting resources and resolving difficulties in procuring production parts



Reduction of maintenance man-hours in product development

- ◆ Implementation of initiatives to improve efficiency in project delivery and services
  - Improved the efficiency and optimized delivery process through use of remote engineering in cloud and virtual environments
  - Maximized utilization of GDC<sup>\*1</sup> by developing resource management infrastructure, etc.
  - Completion of system integration for all global service sites<sup>\*2</sup>
- ◆ Cost reduction in project procurement: approx. 2 billion yen (FY21 and FY22)  
Improved efficiency and reduced costs in global procurement process

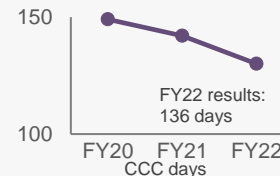
<sup>\*1</sup> Global Delivery Center

<sup>\*2</sup> Through introduction of Yokogawa's ServAir after-sales service core business system

- ✓ Steady implementation of countermeasures to address rising costs
- ✓ Progress is being made in building a business process and system for operational excellence, which is the key to improving profitability in the medium to long term. We have drawn up an overall picture of what we wish to achieve and will accelerate our efforts.

## Challenges and Activities

- ◆ Difficulty in procuring manufacturing parts and goods for projects, and rising prices
  - Continue to negotiate, expand suppliers, use alternative parts, design changes, etc.
  - Ongoing selling price optimization initiatives
- ◆ Accelerate infrastructure development to globally improve operational efficiency
  - Reform organizational structure
  - Unify HR management systems and improve HR system infrastructure
  - Standardize business processes and improve process connectivity, and **make major changes** to information infrastructure
  - Develop infrastructure to improve customer experience
- ◆ Reduce CCC
  - Through persistent effort, change local business customs and long-standing habits
  - Continue PDCA for improvement



# Accelerate Growth 2023 Review of Four Basic Strategies

4

## Optimize internal operations and transform mindsets

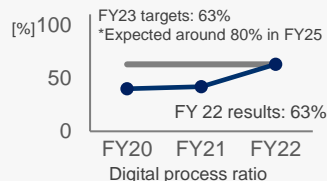
Strengthening the corporate base

- Strengthen strategic planning functions
- Cultivate a corporate and organizational culture that encourages entrepreneurial spirit
- Strengthen internal DX and transform business models
- Transform skills and improve engagement

## Outcomes

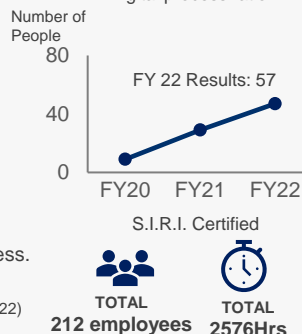
### ◆ Internal DX efforts

- Steady progress in global efforts to digitalize business processes  
Achieved FY23 digital process ratio<sup>\*1</sup> target ahead of schedule



### ◆ Progress in efforts to transform the skills and mindset of human resources

- Increased number of DX human resources in IT sector
- Progress in training S.I.R.I.<sup>\*2</sup> certified personnel to lead IA2IA/smart manufacturing
- Established a global training center  
Development of solution proposers is making good progress.



Global Training Center Achievements (FY22)

- ✓ The importance of skills transformation and mindset change is well recognized. Every initiative is moving forward.
- ✓ Creating an organization that enables collaboration and optimization across various borders, and a system that enables each employee to grow by fully understanding what is required of them in the future (Global HR Transformation Project)
- ✓ Accelerating efforts to move into the implementation phase an HR strategy that is aligned with management strategy

## Challenges and Activities

### ◆ Accelerate efforts to move into the implementation an HR strategy that is aligned with management strategy

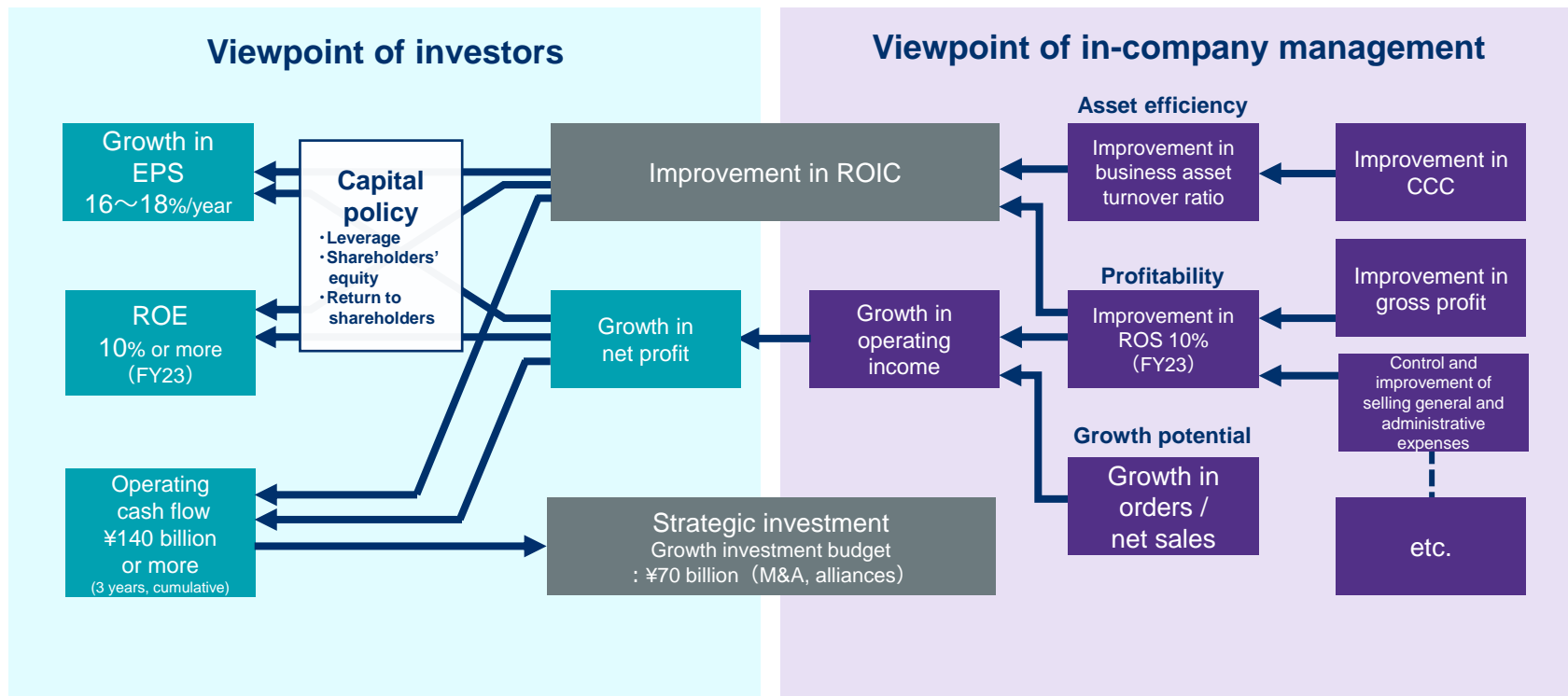
- Integrate global HR systems, processes, and databases to create a "best person for the right job" platform across the organization.
- Define the quality and quantity of HR required to meet future needs and align this with business strategy.
- In alignment with business strategy, train personnel to work in DX, solution proposal, and other areas, and strengthen recruiting.

Example) Enhance educational opportunities for all Group employees through Yokogawa-University. Strengthen development of business leaders (e.g., global training centers).

<sup>\*1</sup> Digital process ratio: Ratio of the number of processes utilizing global digitalized platforms to the total number of processes defined for each business process

<sup>\*2</sup> The Smart Industry Readiness Index was created by the Singapore Economic Development Board in partnership with a network of leading technology companies, consultancy firms, industries, and academics. It assesses the digital readiness level based on the three core elements of Industry 4.0: Process, Technology, and Organization.

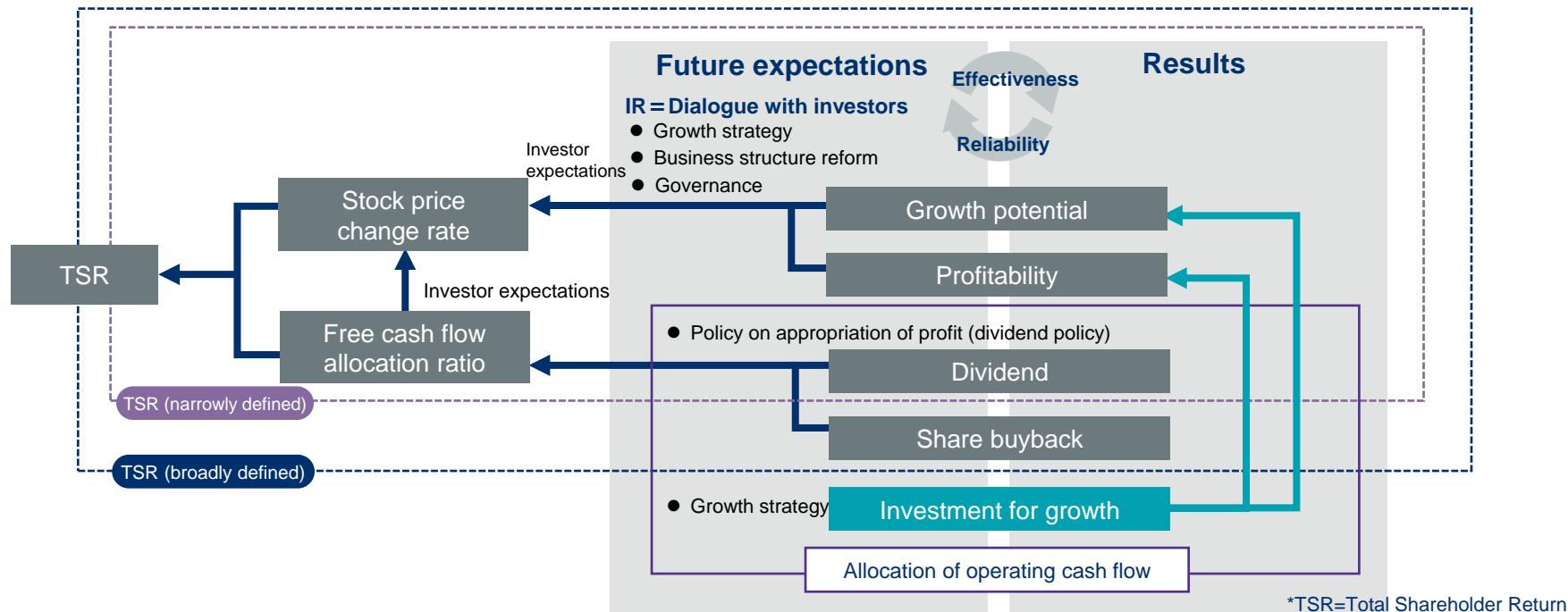
# Main initiatives for achieving targets (KPI structure)



# Shareholder value

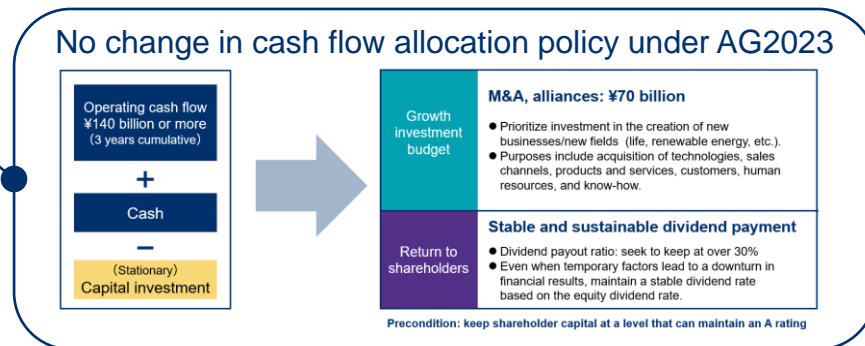
Ensure that TSR\* exceeds shareholders' cost of equity while seeking to maintain a close dialogue with the capital markets (investor relations).

## Maximizing the shareholder value over the mid- and long-term



## Steadily execute growth investments to enhance and maximize corporate value over the mid to long term.

- Growth investment budget: 70 billion yen
- AG2023 progress: 24.3 billion yen
- FY22 results: 12.1 billion yen



### Key results of FY22

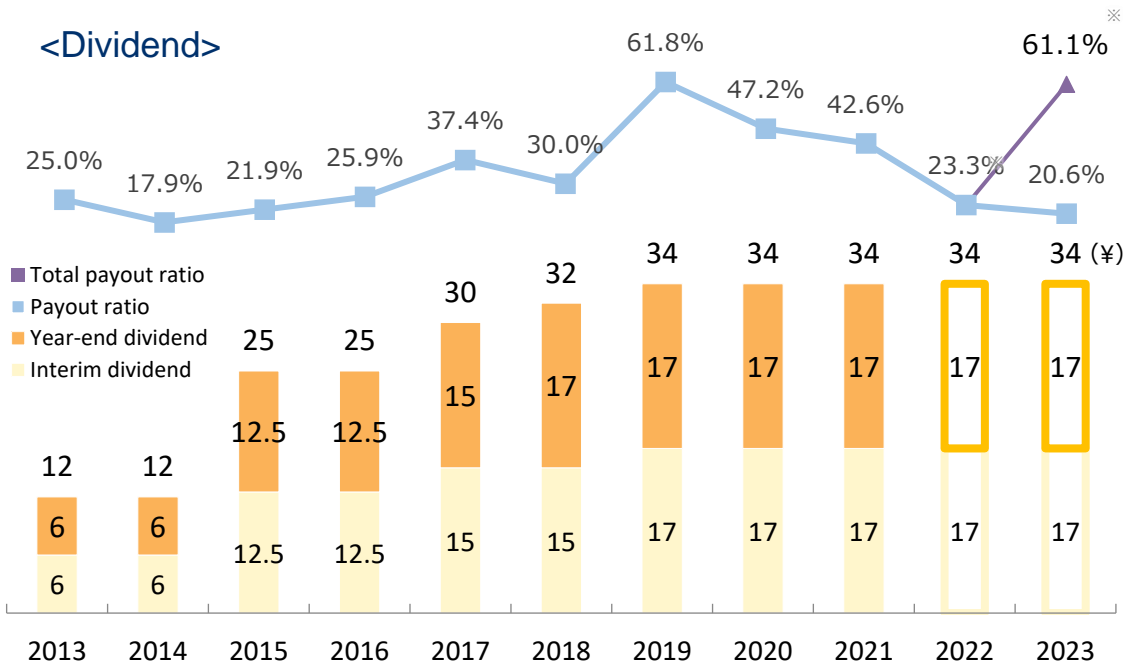
- Acquisition of Dublix Technology ApS (May 2022)  
The addition of Dublix's combustion control and boiler performance enhancement solutions to Yokogawa's lineup enables the provision of solutions that make both WTE and biomass power plants more efficient and profitable.
- Acquisition of Fluence Analytics, Inc. (Jan. 2023)  
Fluence Analytics is a global leader in polymerization\* reaction monitoring and control. Combining Fluence Analytics' technology with Yokogawa's industry know-how will enable us to work with our customers to digitalize and autonomize processes in the polymer and biopharma industries.
- SynCrest Inc. established (Mar. 2023)  
A joint venture that will engage in research, development, and manufacturing in the promising field of middle-molecular pharmaceuticals as a Contract Research, Development and Manufacturing Organization (CRDMO).

\* The combination of small molecules, called monomers, to form larger molecules (polymers)

# Dividend

- ◆ The FY23 annual dividend will be the same as the previous year.
- ◆ Resolved to acquire of own shares (up to ¥20.0 billion)

## <Dividend>



## <Acquisition of own shares>

Implement shareholder returns  
by acquisition of own shares



Up to ¥20.0 billion

through open-market purchases  
(acquisition period: from May 22, 2023,  
through December 29, 2023)

※"Total payout ratio and Payout ratio" in the graph of Dividend does not consider the impact of the acquisition of own shares.  
Therefore, it may change depending on the status of future acquisition of own shares.

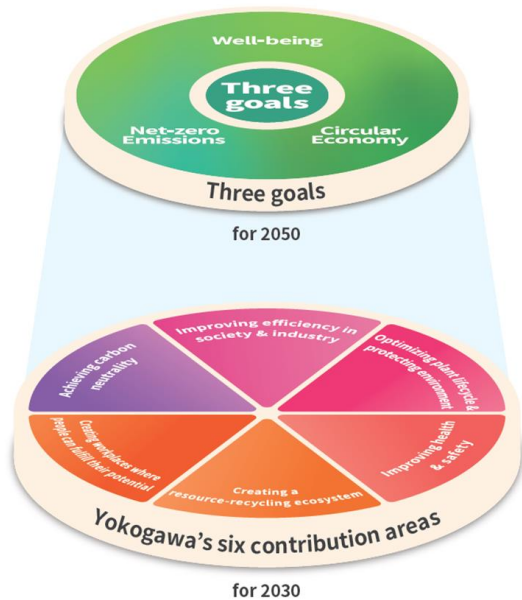
# ESG Management

## Managing from an ESG perspective



# Sustainability Strategy

Through our business, we solve the issues of our customers' businesses and make a significant contribution to society and the environment.



## Ensure well-being

Quality life for all

We support people's health and prosperity through the achievement of safe and comfortable workplaces and our pursuits in such areas as the life sciences and drug discovery. We promote human resource development and employment creation in local communities, as well as diversity, equity and inclusion.

### “Three goals” in achieving a sustainable society by the year 2050

#### Achieve net-zero emissions

Stopping climate change

We aim for net-zero emissions, which means that greenhouse gas concentrations in the atmosphere do not rise due to the balance of emissions and the absorption of greenhouse gases, which can be accomplished through the introduction of renewable energy and the efficient use of energy.

#### Make transition to circular economy

Circulation of resources and efficiency

We aim to realize a social framework and ecosystem in which resources are circulated without waste and assets are utilized effectively. We are also contributing to the efficient use of water resources and the supply of safe drinking water.

#### Achieving carbon neutrality

Reducing GHG emissions and enabling the transition to affordable, reliable, and sustainable forms of energy

#### Improving efficiency in society & industry

Optimizing production, enabling autonomy, and facilitating the efficient use of resources and energy through DX

#### Optimizing plant lifecycle & protecting environment

Supporting both the long-term optimal operation of plant assets and the reduction of their environmental footprint

### Six contribution areas for accelerating contribution and growth toward 2030

#### Creating workplaces where people can fulfill their potential

Establishing an equal opportunity workplace where employees can be treated with dignity and fulfill their potential

#### Creating a resource-recycling ecosystem

Fostering the development of the bioeconomy and a circular economy

#### Improving health & safety

Promoting life-related innovation and improving safety in plants and communities

# Further enhancement of corporate governance

~FY20 Continuous enhancement

FY21~ Further enhancement

	2005	2010	2015	2021
<b>Outside directors</b>	● 1 director	● 2 directors ● 3 directors	● 4 directors	● 5 directors, comprising a majority of the board of directors
<b>Voluntary advisory body</b>			● Established nomination and compensation committee ● Established nomination advisory committee and compensation advisory committee	
<b>Compensation system</b>	● Abolished retirement bonuses for directors		● Introduced a restricted stock compensation plan (RS) ● Introduced a performance-linked stock compensation plan (performance share unit plan (PSU))	
<b>Systems and policies</b>	● Revised articles of incorporation to reduce number of directors (25→15) Introduced one year tenure system for directors ● Introduced takeover defense measures	● Discontinued (abolished) takeover defense measures ● Established the Company's independence standards ● Established the Yokogawa corporate governance guidelines	● Abolished the senior advisor, advisor, and honorary corporate associate positions ● Revision of Articles of Incorporation concerning the electronic provision of documents for the general meeting of shareholders (planned)	
<b>Other</b>		● Conducted outside evaluation of the board of directors*	● Appointed a woman as an outside audit & supervisory board member Appointed foreign nationals as officers ● Appointed an outside director as the chairman of the Board ● Appointed a foreign national as a director ● Appointed a female outside director Appointed female officers	

- Using and improving existing systems and frameworks
- Diversifying the board of directors, and enhancing information disclosure
- Creating global human resource system and appraisal/compensation system for the Group
- Enhancing Group governance
- Strengthening internal control and risk management systems

\* Once every three years. Self-evaluation in other years

# Appendix

# About Control ~ Image ~

e.g. Downstream (※)

<Receiving raw materials like crude oil, etc.>



<Refining>



<Petrochemicals & chemical> Furnaces & Pipelines, etc.



Control of  
each equipment

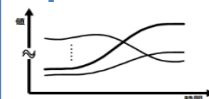
Control and monitor of  
the entire plant



< Distributed control system: DCS >

CENTUM VP

Vnet/IP



FCS



Transmission of  
measurement  
value

Measurement of  
temperature,  
pressure and flo  
rate, etc.



< Field equipment >

※Yokogawa is strongest in downstream industry. Generally, Oil & Gas industry is divided into "the domain of exploration, field development and production" and "the domain of refinery, transportation and Sales". In oil & gas industry, the former is called upstream, while the latter is called downstream, compared with the flow of the river.

# Yokogawa's Main ESG Indexes, etc.

DJSI-World Index  
DJSI-Asia Pacific Index  
FTSE4Good Index Series  
FTSE Blossom Japan Index  
FTSE Blossom Japan Sector Relative Index  
MSCI ESG Ratings AA  
MSCI ESG Leaders Indexes  
MSCI Japan ESG Select Leaders Index  
MSCI Japan Empowering Women Index  
ISS ESG - ESG Corporate Rating Prime status  
Sustainalytics Top-Rated ESG Regional Performer  
CDP Water Security A List  
CDP Supplier Engagement Leader  
SNAM Sustainability Index  
S&P/JPX Carbon Efficient Index  
Carbon Clean 200 (Clean200) selected  
EcoVadis Gold Rating for Sustainability



**FTSE Blossom  
Japan Sector  
Relative Index**

Member of

As of April 2023

## Dow Jones Sustainability Indices

Powered by the S&P Global CSA



**2022** CONSTITUENT MSCI JAPAN  
ESG SELECT LEADERS INDEX

**2022** CONSTITUENT MSCI JAPAN  
EMPOWERING WOMEN INDEX (WIN)

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# FY22 Topics (Alliances · Acquisitions / Orders)

Based on press release date

For more information, see <https://www.yokogawa.com/news/>

## Alliances · Acquisitions

- Apr.** (Shionogi Pharma/Chiyoda/Taisei/Fujimoto Chemicals/Takenaka/Yokogawa/Nagase & Co.) Commencement of business of Pharmira Co., Ltd., a joint venture for contract development and manufacturing of active pharmaceutical ingredients and intermediates
- May.** Yokogawa acquires Dublix, a provider of optimization technologies for waste-to-energy and biomass power plants
- Sep.** Yokogawa acquires Votiva to accelerate ERP business growth in Southeast Asia
- Feb.** Yokogawa acquires Fluence Analytics, a pioneer in digitalizing the monitoring of polymerization reaction processes
- Mar.** Otsuka Chemical and Yokogawa Electric to launch SynCrest Inc., a joint venture targeting the CRDMO business for middle-molecular drugs

## Orders

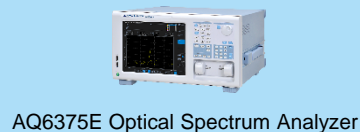
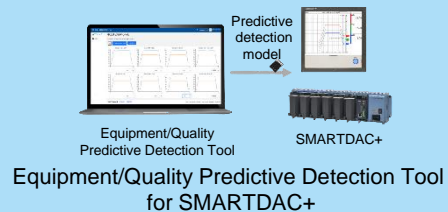
- Aug.** Yokogawa completes installation of IoT system for integrated remote performance management at Kenya's Olkaria geothermal complex, the largest in Africa
- Sep.** Yokogawa selected by Grön Fuels as the preferred supplier of technology, equipment, and services for North America's largest renewable fuels complex  
Yokogawa Selected as MAC for Construction of Europe's Largest Renewable Hydrogen Plant
- Nov.** Yokogawa to provide integrated control system for Australian green hydrogen project

# FY22 Topics (Solutions & Products / R&D)

## Solutions & Products

Based on press release date  
For more information, see <https://www.yokogawa.com/news/>

- Apr. Yokogawa to release Equipment/Quality Predictive Detection Tool for SMARTDAC+ paperless recorders and data loggers
- Jul. Yokogawa Test & Measurement releases AQ6375E and AQ6376E near/mid-infrared band optical spectrum analyzers
- Dec. (Cosmo Oil/Denka/Iwatani/JFE Steel/JNC/KH Neochem/Maruzen Petrochemical/UBE Elastomer/Ube Material Industries/Yokogawa) Signing of MoU on joint study of activities for the realization of a carbon neutral industrial complex in Japan's Chiba Prefecture
- Jan. Yokogawa Solution Service and NTT Communications to start providing "Autopilot" that enables automatic plant operation with AI that learns from operators, a first in Japan
- Feb. Yokogawa launches autonomous control AI service for use with edge controllers
- Mar. In a world first, Yokogawa's autonomous control AI is officially adopted for use at an ENEOS Materials chemical plant
- Yokogawa releases new software Gas Chromatograph AI Maintenance Support



## R&D

- May Yokogawa and DOCOMO successfully conduct test of remote control technology using 5G, cloud, and AI

# FY22 Topics (Others)

## Others

Based on press release date  
For more information, see <https://www.yokogawa.com/news/>

- Jun.** Yokogawa selected as “Noteworthy DX Company for 2022” by METI and the Tokyo Stock Exchange  
Yokogawa joins HAKUTO-R Commercial Lunar Exploration Program as a Supporting Company
- Jul.** Yokogawa Digital Corporation established to support DX in manufacturing
- Sep.** 2022 Yokogawa Sustainability Report published
- Nov.** Yokogawa receives IR Special Award from JIRA  
2022 Yokogawa Report published
- Dec.** Held Yokogawa IR Day 2022 (“The progress of management by industry” and “Energy & Sustainability Business” ) and Yokogawa DX briefing  
Yokogawa included in Dow Jones Sustainability World Index  
CDP recognizes Yokogawa with a prestigious 'A' score for initiatives and transparency on water security for the third time
- Feb.** “Yokogawa Report 2022” highly rated by GPIF’s domestic equity management organizations
- Mar.** Factorial Kernel Dynamic Policy Programming (FKDPP) autonomous control AI algorithm takes highest honor in Japan Industrial Technology Awards  
Yokogawa acquires Science Based Targets (SBT) Certification for greenhouse gas emission reduction targets



Noteworthy DX Company for 2022



IR Special Award

The information pertaining to our business plans and forecasts that has been provided in this presentation and at analyst meetings contains forward-looking statements that are based on our management's current knowledge and require the making of assumptions about future events.

As such, it cannot be guaranteed that these statements will not differ materially from actual results.

Yokogawa undertakes no obligation to publicly update or revise any forward-looking statements after the issue of this document except as provided for in laws and ordinances.

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