

## Yokogawa's Philosophy and History

For Yokogawa, sustainability and business activities are inseparable.

Under Yokogawa's Purpose, which reads, "Utilizing our ability to measure and connect, we fulfill our responsibilities for the future of our planet," Yokogawa has set the sustainability goals as "Three Goals" for the society we aim to achieve by 2050, and we continue to make unrelenting efforts to realize a sustainable society.

## **Founding Principles**

**Quality first** 

**Pioneering** spirit

Contribution to society

## The Yokogawa Philosophy

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

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

Revised in 2022

## Statement on Yokogawa's Aspiration for Sustainability

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

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

## Yokogawa's Purpose

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

Aspiring to address social issues by leveraging Yokogawa's ability to measure and connect, we formulated Yokogawa's Purpose.

1915 Founded

1988 Established the Yokogawa Philosophy

• Set the sustainability goals "Three Goals"

 Defined six contribution areas

• Established the Yokogawa Group Code of Conduct

2017 • Joined in WBCSD (World Business Council for Sustainable Development)

• Established the Yokogawa Group Human Rights Policy



## **Contents**

## Introduction

- Yokogawa's Philosophy and History
- Contents
- Highlights of the 2024 Yokogawa Sustainability
- Message from the President
- Yokogawa Business Overview
- Stakeholder Engagement

## 11 Our Goals

- **Sustainability Strategy** 12
- Sustainability Transition Sales and Focus Area 13
- **Materiality Analysis** 14
- **Social Impact Indicators** 15

## **16 Our Stories**

- Stories of Growing Our Businesses and **Contributing to Sustainability Transition**
- **Case Studies of Sustainability Contributions**

## 26 Social

- **Human Resource Management**
- 30 **Comfortable Work Environment**
- 33 Occupational Health and Safety
- 35 **Respect for Human Rights**
- **Community Engagement** 37

## 38 Environment

- **Environmental Management**
- **Environmental Practices** 41
- Climate Strategy Response to TCFD 42
- 47 **Initiatives toward Achieving Carbon Neutrality**
- **Environmental Initiatives at Business Facilities** 51
- Initiatives for Biodiversity Response to TNFD

## 56 Governance

- **Sustainability Governance**
- **Risk Management**
- **Code of Conduct and Compliance** 61
- **Supply Chain Management**
- **Information Security**
- **Privacy and Data Protection**
- **Quality Assurance**

## 73 Information

- AG2023 Target Review (Social Impact Indicators)
- 75 AG2023 Target Review (Business Activity Indicators)
- 76 **Sustainability Data**
- **Third-Party Verification**
- Company Profile / Editorial Policy



## Highlights of the 2024 Yokogawa Sustainability Report



## **Message from the President**

**Transitioning to sustainability** through our ability to measure and connect P.4



## **Our Goals**

**Set sustainability transition** sales to accelerate contribution and P.13 growth

Conducted a double materiality assessment

for GS2028





## **Our Stories**

Provided remote operation monitoring solutions for the Ishikari Bay New Port Offshore Wind Farm, one of the largest offshore wind P.20 power stations in Japan

Successfully conducted a demonstration test for "on-demand production," which dramatically improves the efficiency of P.23 pharmaceutical manufacturing

Provided integrated control system and energy management system for Yuri **Green Hydrogen Project in Australia** P.21

Started collaboration to make effective use of unused biomass resources generated in the process of manufacturing vegetable oil



Improved safety and efficiency of plant maintenance work with **support** for introducing robot solutions

P.24

Successful Deep Sea Observation of sea level fluctuations in the Nankai Trough Seafloor **Observation Network for Earthquakes** and Tsunamis (N-net) P.25



## Social

Achieving business strategies and corporate growth, Improving employee well-being and engagement





## **Environment**

Accelerating the achievement of carbon neutrality





## Governance

Transition to a Company with a Nominating Committee, etc. and revision of executive compensation system





## **Message from the President**

## Transitioning to sustainability through our ability to measure and connect

Director, President and CEO. Representative Executive Officer

## Initiatives for addressing complex sustainability issues

Amidst a surge in climate disasters around the world, COP28, an international climate change conference, was held in the United Arab Emirates (UAE) in December 2023, with an announced target of tripling renewable energy capacity and doubling the global average annual rate of improvement in energy efficiency. Agricultural and food issues have been integrated into climate change measures, and companies must now simultaneously deal with the interlinked issues of climate change, water, and biodiversity.

In addition, we recognize that human capital initiatives involving such aspects as respect for human rights and the improvement of employee engagement have increased in importance as essential drivers for corporate growth. Other serious issues include the robust cybersecurity and privacy protection measures needed to move forward with the utilization of digital technologies.

Based on Yokogawa's Purpose, which reads, "Utilizing our ability to measure and connect, we fulfill our responsibilities for the future of our planet," Yokogawa has defined the Three Goals for sustainability as its vision for society in the year 2050, and has specified six areas in which it will contribute toward their achievement. In the new Growth for Sustainability 2028 (GS2028) medium-term business plan announced in May, we stated that the solving of social issues through our contributions in these six areas would be a strategic pillar in our activities, and that this would lead to our growth.

## Aiming for business growth while contributing to sustainability

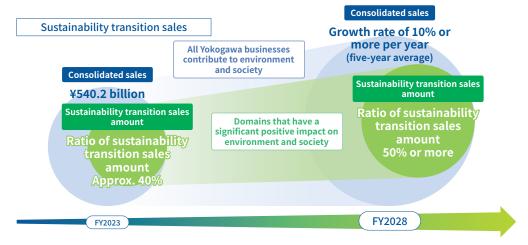
Yokogawa combines its business activities with contributions to society and the environment. Supporting the stable supply of energy with low-carbon technologies, we expand the services that will help to advance the achievement of a decarbonized society, and contribute to people's healthy lives through our activities in the food, pharmaceutical, and water fields. We also support customers in various business fields through the presentation of solutions to issues at job sites, including the measurement and visualization of energy consumption and GHG emissions, and the pursuit of safety at industrial facilities. In GS2028, we decided to calculate sales in growth areas that contribute to sustainability, and have categorized this as sustainability transition sales.

The target domains for sustainability transition consist of a total of 14 items, including the expansion of value provision in the renewable energy market by the Energy & Sustainability



## Message from the President

business, decarbonization in the materials industry by the Materials business, productivity and quality improvement in the pharmaceutical, food, and bio sectors by the Life business, and support to widen usage and improve efficiency with renewable energy and EVs by the Measuring Instruments business. This report presents strategies and gives details on contributions and targets for individual items, which are summarized in a section titled "Stories of Growing our Businesses and Contributing to Sustainability Transition."



## System of systems: Driving the sustainability transition

The transition to a sustainable society is a global megatrend. It is difficult to achieve solely by the efforts of individual enterprises, and requires a transformation across society as a whole. Under these circumstances, we attach special importance to system of systems (SoS), a concept whereby the establishment of connections between independently operating systems forms a system that not only promotes efficiency, but also leads to societal transformation.

Yokogawa will construct such SoS through close cooperation with its customers in operations and other aspects, and through the utilization of AI, digital twins, and other technologies that enable autonomous production and innovations that lead to growth in productivity. We are already seeing cases where inter-system collaboration made possible by big data analyses of production site data and the use of AI operational pattern modeling technology has created significant value by dramatically speeding up problem solving.

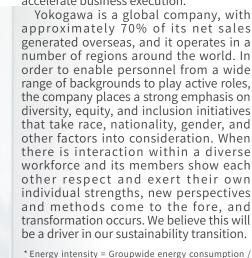
Over the past year, I have traveled to different regions to visit and speak with customers in a variety of industries. Some are introducing AI, simulation, digital twin, and other cutting-edge digital technologies, and others are focusing on putting robust cybersecurity into place. Issues vary, depending on the customer. While working with them to find solutions to whatever issues they face, we are making forward progress with the construction of SoS.

## Transformation happens when everyone rises to fulfill their potential

Yokogawa is picking up the pace of its activities. Regarding GHG emissions, with GS2028 we have brought our Scope 1 and 2 carbon neutrality targets forward by 10 years, from 2040 to 2030, and have set a carbon neutrality target for Scope 3. In addition, energy efficiency indicators have been newly set for the purpose of increasing Group-wide energy efficiency, with a targeted 30% improvement in energy intensity\* by fiscal year 2030 compared to fiscal vear 2023.

In June 2024, Yokogawa made the transition to a Company with a Nominating Committee, etc. structure with the aim of further enhancing its corporate governance and corporate value over the medium to long term. With the goal of making us a highly resilient company that can flexibly respond to changes in its business environment, this will more clearly separate the functions and roles of management supervision and business execution, and

accelerate business execution.









Introduction

## **Yokogawa Business Overview**

## **Business Segments**

Yokogawa contributes to solving social issues, utilizing its ability to measure and connect.

We have divided the Industrial Automation and Control business, our main business, into three industry subsegments: Energy & Sustainability, Materials, and Life. That allows us to provide products and solution services that can solve issues of customers in various industries and social issues.

## **Energy & Sustainability**

By supporting our customers operate safely and optimally across their energy value chains, we help address the continuing increase in energy demand and contribute to the creation of a low-carbon society. In parallel, we contribute to the overall water recycling chain.

- Renewable energy
- Oil and gas (upstream)
- Refining, petrochemicals
- Power
- Energy management system (EMS)
- Energy storage
- Water & wastewater, industrial water

### **Materials**

Our business offers solutions to customer challenges in the production process—such as efficient energy use, recycling, and switch to raw materials with a lower environmental impact—and thereby contributes to the realization of a new recycling-oriented society that enables the development of a comfortable society that can coexist with the global environment.

- Specialty and fine chemicals
- Biochemicals
- Fertilizers
- Mining and metals
- Mobility
- Electrical machinery, electronics &
- Iron & steel, nonferrous metals
- Pulp & paper
- Fibers & textiles

### Life

The growing global population is expected to put a strain on the production and supply of food. Demand for pharmaceuticals is also rising steeply. We contribute to the supply of pharmaceuticals that save people's lives and health, and safe food everyone can eat with peace of mind. The Life business provides solutions that support people's lives and protect their health and safety.

## Pharmaceutical

- Healthcare
- Food & beverages

## **Measuring Instruments, New Businesses and Others**

Our business provides a wide variety of unique high-precision measurement solutions: electrical measuring instruments that gauge electricity, etc.; optical measuring instruments that quantify the wavelength and power of light: manometers: and software-based measurement systems. Through the provision of these solutions, we contribute to solve our customer's challenges in raising the energy efficiency of various devices, innovating data communications, laying fiber optic cables, and maintaining their plants.

#### Measuring instruments business

- Energy
- Communications
- Healthcare

#### New businesses and others

- Imaging AI & IoT
- Bio-related
- Contract research, development, and

Areas for exploration

Disaster prevention, space, and ocean



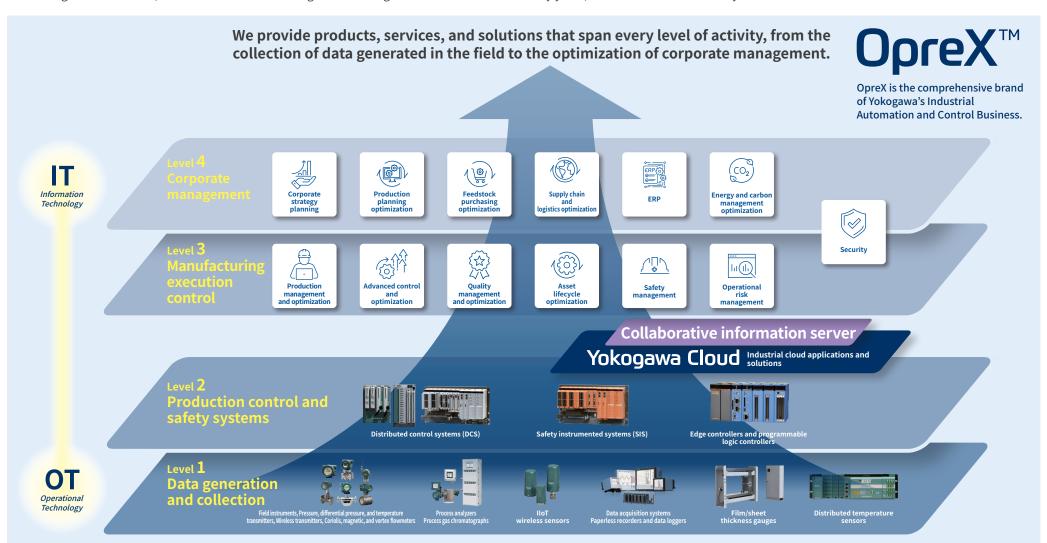
Introduction



## Yokogawa Business Overview

## **Products and Solutions of Industrial Automation and Control Business**

In the three business segments of "Energy & Sustainability," "Materials," and "Life," we integrate our high-quality, highly reliable products and solutions, using leading-edge technologies such as digital twins and AI, as well as control technologies that Yokogawa has cultivated over many years, to solve the issues faced by our customers.





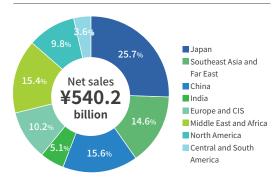
Introduction

## Yokogawa Business Overview

## **Network**

Yokogawa conducts business in more than 60 countries around the world. We are actively recruiting local human resources at each location and have built trust with customers and local communities over many years. Moreover, based on our corporate philosophy, we are engaged in businesses for the realization of a sustainable society as good citizens.

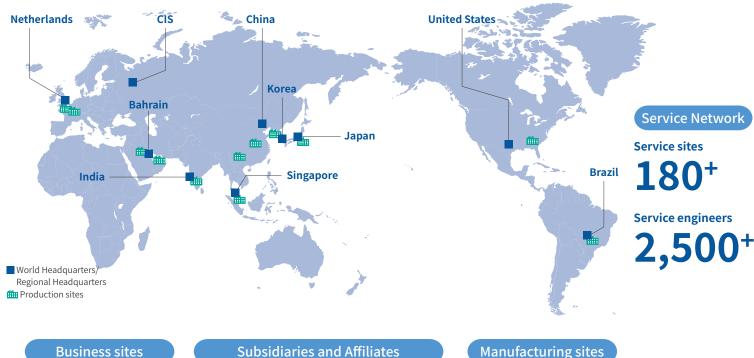
## Net Sales by Region



## **Employees by Region**



## **Global Network Supporting Business Growth**



countries

in Japan

outside Japan

\* Including branch offices, branches and representative offices

countries

(Fiscal year 2023 results)

## **Stakeholder Engagement**

Yokogawa is expanding its engagement with diverse stakeholders.

Customers	Shareholders and investors	Employees	Suppliers	Academia	International society and local communities
Objectives and themes	Objectives and themes				
<ul> <li>Solve social issues faced by customers</li> <li>Establish a support system</li> </ul>	Disclose information in a timely and appropriate manner     Have active and continuous dialogue     Feedback to management	Employees' engagement     Human resource development and capability development     Establish a comfortable working environment     Respect workers' rights	<ul> <li>Equal and fair business relationships</li> <li>Promote supply chain sustainability</li> </ul>	Promote innovation to solve social issues     Establish and strengthen networks through strategic collaboration	Contribute to the sustainable development of an international society     Protect the global environment     Contribute to local communities as a good citizen
Key Initiatives					
<ul> <li>Provide consulting services to identify and solve issues</li> <li>Develop and provide products and services utilizing cuttingedge technologies and DX</li> <li>Establish a global service structure</li> </ul>	<ul> <li>Financial results briefings (quarterly) and general shareholders meetings (annually)</li> <li>IR events including business strategy briefings</li> <li>Individual meetings with investors and analysts</li> </ul>	Conduct engagement surveys to identify the status and respond to it     Leverage Yokogawa University (an inhouse institution) to promote learning     Establishing the occupational health and safety committees     Consultation between labor and management	Implement sustainable procurement based on SAQ (Self-Assessment Questionnaires)     Promote green procurement with less environmental burdens	Participate in projects and consortiums     Financial and human resource support for innovative technological research activities	<ul> <li>Participate in international projects to help emerging and developing countries develop further</li> <li>Reduce GHG and preserve water resources</li> <li>Cooperate with NGOs and NPOs</li> <li>Engage in volunteer activities in local communities</li> <li>International Standardization Activities</li> </ul>
Related information					
Products and Solutions of Industrial Automation and Control Business (P.7) Network (P.8) Our Stories (P.16)	Investor Relations  For more information, disclosed on our website.	Improvement of Employee Engagement (P.27) Human Resources Development (P.29) Comfortable Work Environment (P.30)	Supply Chain Management (P.65)	Energy transition Open campus (ETCA) activities (P.10)	Our Stories (P.16) Community Engagement (P.37) Proposal and development of international standards (P.10)



**External Evaluations** Yokogawa's ESG (environment, social, governance) management has received high external ratings.



Dow Jones Sustainability Indices





MSCI

















2024 CONSTITUENT MSCI JAPAN

EMPOWERING WOMEN INDEX (WIN)











## **Stakeholder Engagement**

## **Developing Future-oriented Solutions as** Part of an Ecosystem with Shell

#### Customers

Academia

Yokogawa has been closely working together with Shell in the Oil & Gas Industry for over 30 years to bring value by collaboration & co-innovation.

In 2022, Shell transformed their Technology Centre in Amsterdam into the Energy Transition Campus Amsterdam (ETCA) where innovative companies come together to find solutions to the world's biggest energy challenges. Shell facilitates the ecosystem by providing a passionate ETCA team, space, and platform for collaboration projects and carries out a lot of research work on the campus. All under the same roof of the ETCA, you'll find offices and laboratories designed to scale technologies.

As Shell breaks new ground forging a path in the Energy Transition, it gives Yokogawa great opportunity to join the ETCA effort and be part of the campus as a founding member from the beginning.

ETCA provides a vibrant and secure environment that is all about further developing technologies and innovative energy solutions and bringing them to market as quickly as possible. This collaboration space will allow Yokogawa to expand our relationships and expertise with innovative companies, to find solutions for the energy transition with all campus participants and our customers. Through this collaboration, Yokogawa is expecting to contribute to solutions in the Clean Energy supply chain to achieve Net Zero emissions in 2050 as our global sustainability goal.

Based on the participation and collaboration in ETCA, Yokogawa will continue working to realize a sustainable society.



The Energy Transition Campus (Amsterdam)



Yokogawa participating in a ETCA campus panel session together with other ETCA members.

## Proposal and Development of Two International **Standards to Support Energy Management and Greenhouse Gas Reduction**

**Employees** 

—International standardization of assessment method for organizational energy managements and optimization of factory energy use—

Yokogawa participates in international standardization activities in the fields of control and carbon neutrality, and supports the worldwide spread of energy management technologies for energy saving and use of renewable energy through international standards for smart manufacturing, industrial networks, etc. In 2023, international standards were published for the assessment of the energy management status of organizations (ISO TS 50011) and for the industrial facility energy management system (IEC 63376) that optimizes energy use in factories, with Yokogawa employees suggesting drafts of the standards and coordinating international discussions as project leaders.

Yokogawa employees have been appointed as the convener (leader) of IEC TC65 JWG17 (System interface between industrial facilities and the smart grid ), an international standardization committee, based on the insights and achievements gained through these activities. By increasing our influence in these international standardization activities, we are expected to play an even greater role in international standardization activities, and this will ultimately lead to the development of human resources for international standardization, which the Ministry of Economy, Trade and Industry of Japan places great importance on, and to Japan's contribution to and leadership in the creation of international rules.

## **Contributing to the Development of Automation Technology through Fostering the Next Generation**

**Employees** 

Mrs. Mahalakshmi Ramesh Kumar of Yokogawa India Ltd. served as an industry expert at many engineering colleges/universities in India based on her experience in training and customer service operations, contributing to the curriculum development incorporating the latest industry trends in Industrial automation domain. In addition, under her leadership, Yokogawa India Training Team has launched a unique training program "SPiCE" for engineering students in the field of Process Automation in 2000 and delivered more than 16500 man-weeks of Industrial Automation training to student community. The training team

received ACE Performance Excellence Award for their success in Virtual Trainings Globally. Yokogawa will continue to actively engage in activities to develop automation technology and create the future.



Yokogawa Technical School (India)



Yokogawa India Training Team





- Sustainability Strategy
- Sustainability Transition Sales and Focus Area
- Materiality Analysis
- Social Impact Indicators



## **Sustainability Strategy**

Based on the results of the materiality analysis, we have set six contribution areas in order to achieve the sustainability goals of the "Three Goals," which are the vision for society toward 2050. GS2028 focuses on business activities that contribute to six areas, aiming to expand contributions to society and environment and achieve dramatic business growth.

We will promote the expansion of our contribution to society and environment through medium to long term "social impact indicators." In addition, we will promote business growth through "business activity indicators" set for each business and "sustainability transition sales," which measure the business volume of growth areas that contribute to the sustainability of the Group.



## Sustainability Goals "Three Goals" **Vision for Society toward 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.

### 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.

### Make the transition to a 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.

### "Six contribution areas" toward 2030

Social Impact Indicators

Indicators set from the perspective of long-term social impact for the priority issues in the six contribution areas.



Sustainability Transition Sales 50% in 2028

2028

Growth for Sustainability 2028

Sustainability Transition Sales

Calculate the sales of businesses in growth areas that contribute significantly to sustainability transitions in order to promote business growth while also expanding contributions to sustainability.

Business Activity Indicators

Define focus areas for promoting sustainability transitions and set targets for each business.



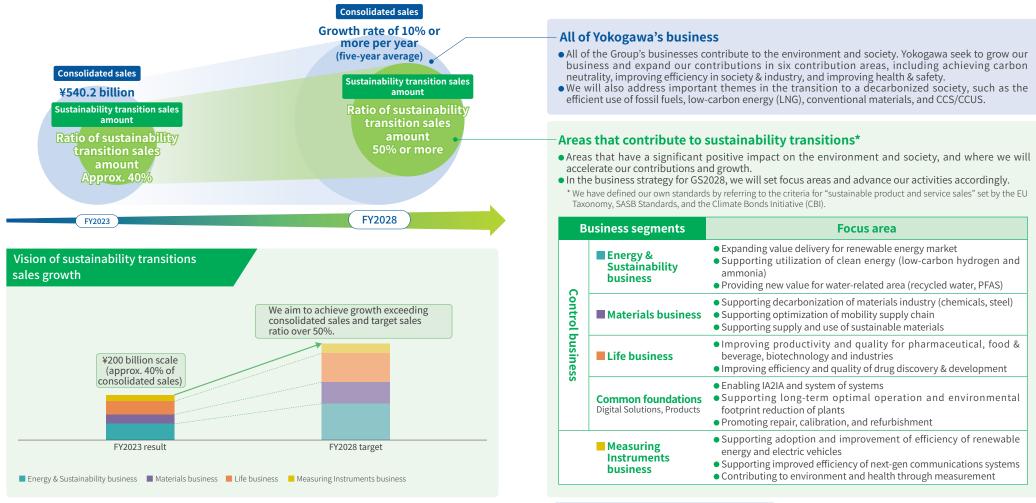




## **Sustainability Strategy**

## Sustainability Transition Sales and Focus Area

In the GS2028, we will measure the sustainability transition sales amount in areas expected to grow and contribute to sustainability. We have set focus areas that contribute to sustainability transitions for each business segment and have already started activities. As we grow our business, we will increase the ratio of sustainability transition sales amount from the current 40% to 50% by fiscal year 2028. Stories of growing our businesses and contributing to sustainability transition are presented in P.17.







## **Sustainability Strategy**

## **Materiality Analysis**

We defined "materiality" as importance in terms of both "social and environmental impact" and "financial impact on the group." In our previous AG2023 medium-term business plan, formulated in 2021, we identified issues that are highly important and to be resolved by the group (priority issues) and contribution themes (contribution areas) based on surveys conducted with stakeholders in each business area. For GS2028, we have performed a double materiality assessment, referencing the European Sustainability Reporting Standards, and established our sustainability indicators based on the assessment results.

Social and environmental impact

## Process of double materiality assessment

#### Analysis of business structure Step 1

Organized and studied the group's value chain and key stakeholders using transaction data and other relevant information.

#### Identification of sustainability issues relevant to the Group Step 2

Identified and listed sustainability issues relevant to each element of the Group's value chain.

#### Assessment of social and environmental impact Step 3

Assessed the social and environmental impact of each item on the list created in Step 2, considering the extent of the impact, the scale of the impact, and the potential for remediation.

#### Assessment of financial impact for the Group Step 4

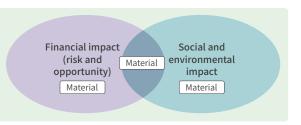
Assessed the potential financial impact and likelihood of the each items on the list created in Step 2, from risk and opportunity perspective.

#### Identification of double materiality Step 5

Identified items assessed to be material in Step 3 or Step 4 or both as double materiality criteria.

### Concept of double materiality

Matters assessed to be material due to their impact on society and environment, or on the Group's finances, or both, are considered material.



## Materiality assessment result

#### Material domain

## **Business opportunities**

- Climate change (adaptation)
- **Corporate management** (risks)
- Energy use
- Waste

#### **Business opportunities**

- Climate change (mitigation)
- Energy use
- Air pollution prevention Occupational health
- IT security
- Water consumption Water discharge management
- and safety

## **Corporate management (risks)**

- Climate change (mitigation)
- Corporate culture
- Training and skills development (within the Group)
- IT security
- Occupational health and safety (within the Group)
- Occupational health and safety (suppliers)
- Resource outflows related to products and services

## **Business opportunities**

Water pollution prevention

### **Corporate management (risks)**

- Secure employment
- Resource inflows including resource use
- DE&I
- Corruption and bribery



Less material



## Financial impact on the Group



## **Sustainability Strategy**

## **Social Impact Indicators**

We will further accelerate contribution while continuing to use the "Social Impact Indicators" established in the previous medium-term Business plan. We have brought forward the target for carbon neutrality for Scope 1 and 2 greenhouse gas (GHG) emissions from 2040 to 2030 by 10 years, and have also set a carbon neutrality target for Scope 3, as well as setting new indicators to improve the efficiency of energy use in business activities.



For the AG2023 Target Review (Social Impact Indicators), see P.74.

			- TOKOgawa
Contribution area	Priority issue	Indicator	FY2030 target
Achieving carbon neutrality		CO <sub>2</sub> emissions control amount through customers	1 billion t-CO <sub>2</sub> (cumulative total from FY2018 to FY2030)
	<ul> <li>Reducing GHG emissions and enabling the transition to affordable, reliable, and sustainable forms of energy</li> </ul>	GHG emissions (Scope1,2) (base year: FY2019)	100% reduction
		GHG emissions (Scope 3) (base year: FY2019)	30% reduction by FY2030*/100% reduction by FY2050 *Emissions from purchased goods and services (Category1) and emissions from use of sold products (Category11)
Improving efficiency in society & industry	Optimizing production, enabling	Economic value created by improving customer productivity efficiency	¥2 trillion
	autonomy, and facilitating the efficient use of resources and energy through DX	Energy consumption (Intensity per sales, base year FY2023)	30% reduction (average improvement: 5%/year)
Optimizing plant lifecycle & protecting environment	<ul> <li>Supporting both the long-term optimal operation of plant assets and the reduction of their environmental footprint</li> </ul>	Number of plants/factories where Yokogawa has contributed to sustainable operations	20,000 plants
		Water withdrawals (Intensity per sales, base year FY2019)	20% reduction
Improving health & safety	<ul> <li>Promoting life-related innovation and improving safety in plants and communities</li> </ul>	Total number of people whose health & safety have been enhanced through solutions provided by Yokogawa's customers	100 million people
		Total reportable incidents frequency rate ((Number of accidents with lost days + Number of accidents without lost days) / Total actual working hours ×1,000,000)	0.40 or less
Creating a resource-recycling ecosystem	Fostering the development of the bioeconomy and a circular economy	Indicators related to sustainable raw materials	To be decided during FY2024
		Engagement to enhance employee well-being	84% or more
Creating workplaces where people can fulfill their potential	<ul> <li>Establishing an equal opportunity workplace where employees can be treated with dignity and fulfill their potential</li> </ul>	Achievements in human resource development and capability development for transformation	Improving the abilities of employees (including skills, etc.) to respond to future Yokogawa business needs
		Achievement level of diversity and equity & inclusion	Proportion of women in managerial positions 20% Enhanced diversity at senior decision-making levels



Introduction Our Goals Our Stories Social Environment Governance Information



# **Our Stories**

- **17** Stories of Growing Our Businesses and Contributing to Sustainability Transition
- **20** Case Studies of Sustainability Contributions



## Stories of Growing Our Businesses and Contributing to Sustainability Transition

We will introduce how we contribute to sustainability transitions in each of our business segments- Energy & Sustainability, Materials, and Life & Healthcare- in terms of both social issues and business opportunities, Yokogawa's approach, contributions to customers, and the Impact on society and environment, and business growth. Specific case studies of contributions are presented on page 20.

Social issues to face and business opportunities

Select social issues to face from the customer's longterm management strategy, etc.

Yokogawa's approach Measures and strategies that utilize Yokogawa's strengths

**Contribution to** customers

Contribution to customers through solving issues in line with measures and strategies.

Impact on society and environment, and business growth

- Creation of value for society and the environment
- Business growth through contribution business

## **Energy & Sustainability business**

Social issues to face and business opportunities Yokogawa's approach **Contribution to customers** Impact on society and environment, and business growth Expanding value delivery for renewable energy market Supporting customers in **Measures and Strategies Society and Environment** achieving decarbonization, Stable power supply combined with ESS Partner strategy with ESS vendors, etc. Achievement of a decarbonized, low-carbon, and low-carbonization, and carbon • Energy recovery from waste for regions with strict environmental regulations (Energy Storage System) carbon-neutral society neutrality through providing Improving power generation efficiency through Achievement of a community with a high level of Promoting labor savings, improved safety, and efficient operation management through solutions resilience and stable power supply through ESS high-efficiency combustion control remote integrated management using IoT Providing efficient power Expanding business into the electricity trading Yokogawa's Strengths **Business Growth** trading services and • High-speed control technology for renewable energy power sources • Expanding the scale of business in the field of market supporting power generation Products for improving combustion efficiency technology and for making boilers healthy renewable energy operators to maximize profits • Supporting utilization of clean energy (low-carbon hydrogen and ammonia) **Measures and Strategies** • Supporting EX (Energy Transformation) for customers in Oil and Gas industry **Society and Environment**  Expanding demand for low-carbon hydrogen, Supporting the transition Cooperating between energy management and process control Achievement of a low-carbon and decarbonized including green hydrogen and ammonia to low-carbon hydrogen, Yokogawa's Strengths society through the production, logistic, and use including green hydrogen and Strengthening and expanding the ammonia • Technologies and extensive achievements cultivated at oil refineries, ammonia plants, of low-carbon hydrogen, etc., including green and methane plant customer base ammonia and LNG hydrogen and ammonia.

System integration capabilities

#### Providing new value for water-related area (recycled water, PFAS)

- Minimizing water resource usage
- Improving water pollution
- Demand for water resources to manufacture green hydrogen

#### **Measures and Strategies**

- Supporting the supply of water resources for drinking and manufacturing green hydrogen
- Providing solutions for water leak detection

#### Yokogawa's Strengths

- Extensive achievements of delivery and project execution capabilities in the water and sewage system in Japan
- Supporting the reuse and recycling of sewage, water and drinking water

#### **Society and Environment**

- Minimizing the amount of water resources usage to reduce the severity of water shortage issues
- Contributing to a well-being health environment through improving water pollution

#### **Business Growth**

 Expanding the scale of business in the water-related field



## Stories of Growing Our Businesses and Contributing to Sustainability Transition

## Materials business

Social issues to face and business opportunities	Yokogawa's approach	Contribution to customers	Impact on society and environment, and business growth
• Supporting decarbonization of materials industry (chemicals, steel)			
Visualization of emissions in industries that release a lot of CO₂ in the production process	Measures and Strategies Providing emissions calculations and real-time monitoring for each product and organization in order to identify and analyze causes based on industry knowledge and provide reduction simulations Yokogawa's Strengths Over 20 years of experience in energy management Providing PIMS (Plant Information Management System) to store actual measurement data from the field side	<ul> <li>Achieving low-carbon processes and contributing to the achievement of CO<sub>2</sub> reduction targets</li> <li>Minimizing cost impact</li> </ul>	Society and Environment  Contributing to the solution of common social issues, with a focus on CO <sub>2</sub> reduction  Business Growth  Expanding the scale of the solution business
• Supporting optimization of mobility supply chain			
<ul> <li>Needs for production optimization due to the rapid increase in demand for EVs</li> <li>Energy saving, optimization, and automation from the mining of raw materials for lithiumion batteries and fuel batteries to the manufacturing process</li> </ul>	Measures and Strategies Providing real-time solutions and services to support material development and productivity improvement in manufacturing processes throughout the supply chain Yokogawa's Strengths The ability to measure accurately and to connect supply chains A network that can provide services globally	Contributing to solving issues such as energy saving and productivity improvement throughout the supply chain	Society and Environment  Promoting the spread of EVs by reducing costs Business Growth  Expanding the scale of business in the mining and metals field

Life business			
Social issues to face and business opportunities	Yokogawa's approach	Contribution to customers	Impact on society and environment, and business growth
• Improving productivity and quality for pharmac	reutical, food & beverage, biotechnology and industries		
Understanding and reducing GHG emissions     Reducing energy consumption to reduce costs     Securing labor resources for business     sustainability     Providing safe and stable supply of     pharmaceuticals and food	Measures and Strategies     Realizing of a Smart Factory through improved productivity, cost reduction, and the provision of a safe and secure work environment in the pharmaceutical and food industries     Providing value through problem-solving solutions centering on manufacturing execution systems (MES)     Developing solutions and knowledge that have been successfully demonstrated in Japan to overseas markets     Yokogawa's Strengths     Human resources with a thorough knowledge of the characteristics of the customer's industry     Engineering and service network	Contributing to improved productivity, reduced costs and reduced energy consumption by shortening the lead time throughout the value chain from new pharmaceutical application to supply     Optimization of the value chain through optimal, highly efficient automated operations based on demand forecasts	Society and Environment  Realization of a society where all people in the world who need pharmaceuticals can obtain them at any time Realization of a society where safe and secure food is stably supplied to all people around the world Business Growth Expanding the scale of business in the pharmaceuticals and food field Expanding overseas business and strengthening of sales structure
• Improving the efficiency and quality of drug dis-	covery & development		
Reduction of R&D costs and improvement of quality through shortening of the pharmaceutical discovery development period Reducing the workload of development staff with the aim of improving research and development efficiency Securing a safe and efficient R&D environment	Measures and Strategies Providing solutions that realize advanced technologies such as observation and analysis of live cell images, as well as quantification and speed-up corresponding to scale-up Providing total solutions from imaging to analysis through laboratory automation, including experimental and equipment management contracting services, virtual labs, and remote labs Yokogawa's Strengths	<ul> <li>Improving the productivity of drug discovery development, such as the discovery of new medical products / pharmaceuticals and the identification of the causes of diseases</li> </ul>	Society and Environment  Providing a safe and secure environment for researchers as well as realizing healthy and quality lives for all people around the world Business Growth

- Reduction of R&D costs and improvement and stabilization of experiment quality through automation
- Yokogawa's Strengths
   Relationship of trust with customers in the market
- Technology that can clearly image living cells
   Efficiency improvements in genome editing, etc. through the provision of new technologies

Contributing to shortened development periods and

reduced costs

• Expanding the provision of life science products





## Stories of Growing Our Businesses and Contributing to Sustainability Transition

## Measuring Instruments business

Social issues to face and business opportunities	Yokogawa's approach	Contribution to customers	Impact on society and environment, and business growth	
• Supporting the adoption and improvement of e	Supporting the adoption and improvement of efficiency of renewable energy and electric vehicles			
<ul> <li>High-efficiency system design to realize decarbonization</li> <li>Reducing CO<sub>2</sub> emissions through the use of renewable energy and the electrification of mobility, such as EVs</li> </ul>	Measures and Strategies Providing solutions for measuring the energy efficiency of entire systems, targeting renewable energy equipment and EVs, etc. Supporting operation control of distributed power sources and technology for connecting and interconnecting with power networks Yokogawa's Strengths Electricity measurement technology with top-class accuracy in the world Data acquisition technology using high-precision time synchronization functions and high-speed data transfer technology	Contributing to improved development efficiency by providing turnkey solutions for high-precision measurement systems     Contributing to research and operations aimed at improving the stability of distributed power sources	Society and Environment  Accelerating the spread of EVs and electric mobility Reduction of CO2 emissions through increased efficiency of renewable energy equipment and EVs, etc.  Business Growth Expanding the scale of business in the decarbonization business	
• Supporting improved efficiency of next-gen com	nmunication systems			
<ul> <li>Rapid expansion of data traffic due to the increase in generative AI and cloud applications</li> <li>Next-generation communications innovation aimed at expanding communication bandwidth and reducing heat loss</li> </ul>	Measures and Strategies     Supporting the early practical application of photonics-electronics convergence communication technology by leveraging the Company's strengths in synchronizing optical and electrical measurements     Providing optimal measurement solutions for the production of optical communication devices     Yokogawa's Strengths     High-precision measurement technology for optical spectrum, wavelength, and power, as well as generation and measurement technology for current and voltage     Providing modular measurement solutions that combine the above	Contributing to next- generation communication technology innovation that supports development and production and achieves high capacity and low electricity consumption	Society and Environment  Practical application of ultra-high-capacity communications while reducing heat loss Expanding opportunities to access digital services through high-capacity data communications Business Growth Expanding the scale of business in the communication business	
• Contributing to environment and health throug	h measurement			
<ul> <li>Expanding applications for non-invasive health monitoring, environmental analysis, and biological analysis</li> <li>Sensor innovation centered on semiconductor technology, such as semiconductor lasers and MEMS sensors</li> </ul>	Measures and Strategies     Providing wavelength measurement solutions and contributing to the compactification and expansion of applications for spectroscopic analysis     Supporting the promotion of healthcare through ultraviolet and infrared optical measurement and pressure measurement solutions     Yokogawa's Strengths     New optical wavelength measurement technology using unique high-performance monochromator technology     High precision, highly stable pressure measurement and pressure generation technology	<ul> <li>Contributing to technological innovation in lasers</li> <li>Contributing to the development of new applications for environmental analysis, healthcare, sterilization, bioscience, etc.</li> </ul>	Society and Environment  Improving air pollution Promoting low-cost daily healthcare Business Growth Expanding the provision of measuring instruments that contribute to health and safety	



Business segment Energy & Sustainability business

Focus area

**Expanding value delivery for renewable energy market** 

Areas where Yokogawa contributes

Achieving carbon neutrality

Improving health & safety

Case study of contribution

## **Provided Remote Operation Monitoring Solutions for the Ishikari** Bay New Port Offshore Wind Farm, **One of the Largest Offshore Wind Power Stations in Japan**



Ishikari Bay New Port Offshore Wind Farm (Photo by: Green Power Investment Corporation)

Wind power generation, a clean energy source that does not emit CO<sub>2</sub>, has high expectations as a measure against global warming. In recent years, the wind turbines have been increasing in size, and offshore installation, which benefit from favorable wind conditions and address noise and land acquisition issues, is expanding globally. Under such circumstances, the Ishikari Bay New Port Offshore Wind Farm, which is owned by JERA Co., Inc. and Green Power Investment Corporation through the special-purpose corporation Green Power Ishikari GK, is the largest commercial offshore wind power station in Japan, employing Japan's first large-scale wind turbines with a single-unit output of 8,000 kW, and it began commercial operation on January 1, 2024.

Yokogawa Solution Service Co., a Yokogawa Electric Group company, provides comprehensive range of services, including design, trial operation support, and maintenance services for the remote operation monitoring system and video monitoring solutions centered on the OpreX<sup>™</sup> Collaborative Information Server for the entire offshore wind power generation facility, spanning from offshore to onshore at the Ishikari Bay New Port Offshore Wind Farm.

The collaborative information server at the core of the remote operation monitoring system centrally manages information from offshore wind power generation facilities, large-scale onshore battery storage facilities, and transformer substations, while also centrally managing information from multiple cameras installed on offshore wind turbines, wind turbine maintenance warehouses, and large-scale onshore battery storage facilities using the video monitoring solutions (Edge gateway (indoor) AG10) of amnimo Inc.\*, a Group company.

As the amount of power generated by wind power, which a type of renewable energy, varies depending on the environment, the remote operation monitoring system provides the necessary information to control the amount of electricity stored in the battery storage system based on information from the power company.

In addition to the above system, Yokogawa Solution Service Co. has also received an order from Green Power Investment Corporation for a system that will aggregate information from wind power stations scattered around Japan in real time and link it to analysis tools in the cloud. Furthermore, with Green Power Investment Corporation, a demonstration experiment has also been started to detect early signs of damage to submarine cables at the Ishikari Bay New Port Offshore Wind Farm using the distributed temperature sensor DTSX3000, which is part of the OpreX<sup>™</sup> Control and Safety System lineup.

While combining our long-established expertise in measurement, control, and information technologies with new technologies to support customers facing various issues in each phase from planning and bidding to construction and operation of wind power generation stations, Yokogawa provides comprehensive solutions for the entire wind power generation business in order to support the efficient operation of wind power generation projects, and we will continue to work closely with customers to solve their issues.





**Energy & Sustainability business** 

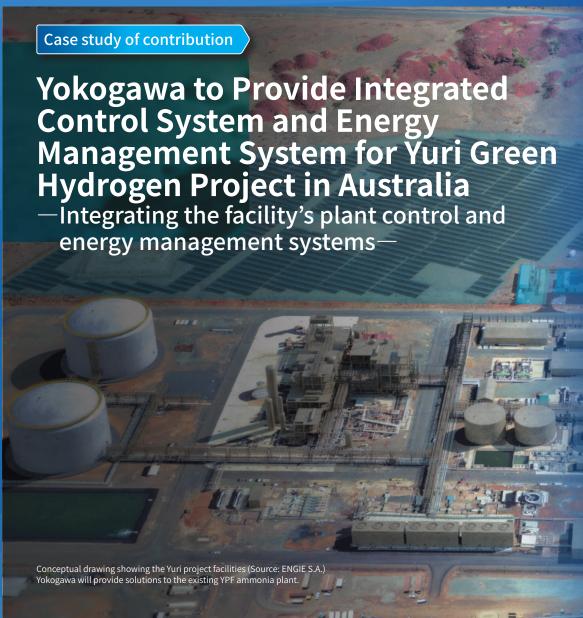
Focus area

Supporting utilization of clean energy (low-carbon hydrogen and ammonia)

Areas where Yokogawa contributes

Achieving carbon neutrality

Improving health & safety



Hydrogen, which emits no carbon dioxide (CO<sub>2</sub>) when used, is gaining attention as a new form of clean energy for the decarbonized era and is expected to find applications in a wide range of fields such as the power business, transportation. and various industries. Green hydrogen, produced using electricity derived from renewable energy, is particularly important in achieving carbon neutrality. Countries and regions around the world, including the EU, are promoting greenhydrogen strategies at a policy level to encourage the use of green hydrogen.

Yokogawa Australia has been selected to provide the integrated control system (ICS) and energy management system (EMS) for the Yuri Green Hydrogen Project (hereafter, the Yuri project), an effort in Australia to produce industrial-scale renewable hydrogen.

The core of the ICS is the OpreX™ Collaborative Information Server. In addition to being compatible with various communication standards and facilitating rapid decision-making in operations, the server enables centralized management by integrating the handling of large amounts of data from the many different kinds of equipment in use at ammonia production plants. The EMS, provided by Yokogawa Group company PXiSE Energy Solutions LLC, controls the solar power plant, battery energy storage system (BESS), and electrolyzer for producing the green hydrogen to be used as a feedstock for the production of green ammonia.

Combining the ICS with the EMS will make it possible to manage the Yuri facility's renewable energy production autonomously to ensure consistent stability and power quality based on the operating requirements of the adjacent ammonia plant, the weather, and other factors.

In a world where systems are becoming closely integrated around the system of systems (SoS) concept, Yokogawa will contribute to the realization of carbon neutrality while achieving ESG management for customers by offering higher value-added solutions, including the integration of plant control and EMSs that enable the timely control of complex power systems.

#### [Yuri Green Hydrogen Project]

The Yuri project is being undertaken in the Pilbara region of Western Australia by Yuri Operations Pty Ltd, a joint venture between ENGIE Renewables Australia Ptv Ltd and Mitsui & Co., Ltd. A consortium comprising the engineering, procurement, construction and commissioning (EPCC) companies Technip Energies and Monford Group Pty Ltd. is constructing these facilities, which will consist of an 18-megawatt solar power plant, 8-megawatt battery energy storage system (BESS), and 10-megawatt electrolyzer. Using carbon-free solar energy, the facility will be able to produce up to 640 tons of green hydrogen per year. The hydrogen will be used as a feedstock to produce green ammonia at an adjacent ammonia plant operated by Yara Pilbara Fertilizer Pty Ltd (YPF). YPF is a wholly owned subsidiary of Yara International ASA, which is one of the world's largest producers of nitrogen-based mineral fertilizers.





Business segment Materials business

Focus area

## Supporting supply and use of sustainable materials

Areas where Yokogawa contributes

Achieving carbon neutrality

Improving efficiency in society & industry

Creating a resource-recycling ecosystem



Bench plant owned by Phytochem Products Inc. (Sendai City, Miyagi Prefecture)

Byproducts from the manufacturing of rice, palm, rapeseed, soybean, and other vegetable oils contain useful compounds such as vitamin E, but many of these materials end up being thrown away and not used because in order to separate and recover them as resources, specialized equipment is required to create an environment with high temperatures and high vacuum conditions..

To solve this problem, Yokogawa Solution Service Co. and Phytochem Products Inc. have entered into a joint development agreement to establish manufacturing technology that extracts functional ingredients and the main components of biofuels from biomass resources that have been disposed of as a byproduct of the vegetable oil manufacturing process, with the aim of commercializing the technology in 2026 or later.

Phytochem Products Inc. has own technology for extracting useful ingredients from vegetable oils using synthetic resins with ion exchange action that have been used as separation agents in water treatment. In the ion exchange resin method, it is possible to extract useful ingredients from vegetable oil by-products by using only the ion exchange process. In addition, compared to existing technologies, since it does not require a high-temperature, high-vacuum environment, it is possible to reduce energy consumption. Furthermore, since it is also possible to extract heat-sensitive components such as vitamin E in a stable manner, thereby not requiring the use of deleterious substances that are necessary in conventional methods, it also has the advantage of superior safety.

Yokogawa Solution Service Co. has been providing production control systems, measuring instruments, and solutions that enable highly efficient and safe operations for factories in various fields, focusing on measurement, control, and information. Through this collaboration, we will examine methods to perform real-time analysis and estimation, and measurement of fulnctional ingredients of the products. based on the insight that Phytochem Products Inc. has regarding the measurement data from the separation and recovery processes, while also applying the modeling technology that the Yokogawa Group owns, and automating and optimizing the separation and recovery processes for unused oil, thus we aim to establish and develop technologies that will achieve both mitigation of environmental impacts and economic efficiency.

Through this collaboration, we will provide a package of optimized plant control in addition to energy-saving, highyield process technology, and we will achieve an early plant startup and a process with low environmental impact and operating costs through continuous improvement in operations aiming to withstand fluctuations such as raw material variation. By providing process licenses, measurement technology, and modeling technology for the ion exchange resin method for commercial plants in fiscal year 2026, we will promote the realization of carbon neutrality and the transition to a circular economy society.





**Business segment** 

Focus area

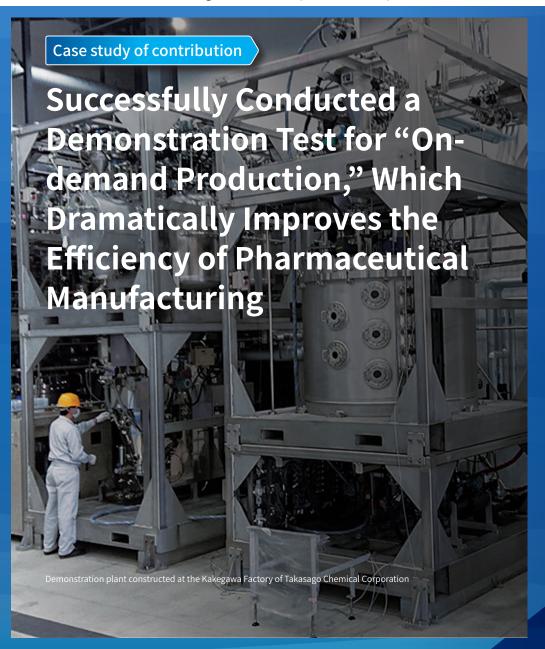
Life business

Improving productivity and quality for pharmaceutical, food & beverage, biotechnology and industries

Areas where Yokogawa contributes

Improving efficiency in society & industry

Improving health & safety



At a time when decarbonization innovation is essential for achieving carbon neutrality, active efforts are also underway through industryacademia-government collaboration to transform the manufacturing of functional chemicals, including active pharmaceutical ingredients and intermediates, towards a sustainable industrial structure. As many high-performance chemicals used in pharmaceuticals are manufactured using the batch production method\*1 both in Japan and overseas, reducing the amount of waste and CO<sub>2</sub> emissions generated during production, as well as adapting to "on-demand production," that creates "only the necessary amount of the necessary thing at the necessary time," are key challenges.

Against this backdrop, Yokogawa Solution Service Co., in collaboration with the National Institute of Advanced Industrial Science and Technology, Takasago Chemical Corporation and other companies, participated in the development of the reconfigurable modular pharmaceutical manufacturing equipment "iFactory®"\*3 using a continuous production method, as part of the "Strategic Innovation Program for Energy Conservation Technologies"\*2 subsidized by the New Energy and Industrial Technology Development Organization (NEDO), and successfully conducted demonstration tests through the construction of a demonstration plant at the Kakegawa Factory of Takasago Chemical Corporation.

In order to achieve an on-demand continuous production process that is expected to reduce energy consumption and waste emissions, this program began developing "iFactory®" in July 2018, conducted demonstration tests until July 2023, and completed five years of activities. Through this demonstration tests, we have achieved the world's first full-automatic continuous production process, including the handling of solids for over eight hours on a practical scale, and have also demonstrated the effect of reducing energy consumption by more than 80% and waste emissions by more than 60% compared to batch production.

In this demonstration tests, by leveraging the engineering strengths accumulated across various industries, Yokogawa Solution Service Co. has been responsible for the overall implementation of the control system for "iFactory®" and have successfully completed it. "iFactory®" includs the designing integration functions with analyzers for continuous production, and the establishing a control system, manufacturing execution system (MES), and energy management system (EMS) that enable flexible response to multi-products variable production through the reconfiguration of unit operation equipment.

As the consideration of the introduction of continuous production facilities intensifies as a transformation to production systems capable of addressing urgent social issues such as global warming and population decline, this program will be a significant advancement towards on-demand pharmaceutical production. Yokogawa Solution Service Co. supports the construction and practical application of multi-product variable production facilities using "iFactory®" by providing solutions centered on control systems, and is striving to achieve energy savings and improve the efficiency of production and resources in pharmaceutical manufacturing.

- \*1 Batch production: The main production method for chemical products such as pharmaceuticals, chemicals, and fine chemicals. A production method in which all raw materials, etc. are put into a reaction tank, and the product is removed after all the reactions of the substances have been completed.
- \*2 Strategic Innovation Program for Energy Conservation Technologies / Development of iFactory™ for pharmaceutical manufacturing based on the interconnection of reconfigurable modular unit operations (FY2018-2023)
- \*3 iFactory®: A collective term for unit operation equipment, utility facilities, analyzers, and control systems used for fully automated continuous manufacturing of functional chemicals, such as active pharmaceutical ingredients and intermediates.





**Business segment** 

Common foundations

Focus area

Supporting long-term optimal operation and environmental footprint reduction of plants

Areas where Yokogawa contributes

Improving efficiency in society & industry

Optimizing plant lifecycle & protecting environment

Creating a resource-recycling ecosystem



Plant maintenance activities in the process industry involve two common challenges. One is "danger." Working at heights, in closed areas, and in areas where volatile substances are present, is dangerous for the workers. The other is a "labor shortage" due to an aging workforce. The shortage of experienced personnel poses a challenge.

To address these challenges, Yokogawa creates new value by providing robotic solutions that assist on-site

operators in their work.

For the first challenge, "danger," we will attempt to mitigate any danger. Explosion-proof robots can operate safely even in areas where volatile substances are present. Through remote operation, workers can monitor the situation on-site in real-time via cameras mounted on robots without entering the danger areas. In addition, by mounting a camera on a drone, workers can efficiently monitor high-altitude areas in a safe environment without the need for scaffolding or ladders, which pose the risk of falling.

As for the second challenge of "labor shortage," we will address and resolve the issue. By introducing robot solutions, robots can take over routine tasks, thereby achieving improved work efficiency. By equipping robots with devices such as cameras, sound-collecting microphones, and gas detectors, it is possible to collect

visual, temperature, and sound information, and detect the presence of hazardous and volatile gases. By analyzing the information collected by the robots during its patrols with AI software, it is possible to notify operators in the control room or report it as an automatically generated patrol report. By delegating the patrol work to the robots, workers can concentrate on more value-added tasks.

Yokogawa provides one-stop solutions that continuously support from consulting to implementation, operation

and maintenance to ensure the reliability, availability and sustainability of robot solutions in solving operational and maintenance challenges of customer plants.

• Consulting: Problem identification. best-suited solution, hardware and software selection



- Implementation: Use case development and solution engineering
- Operation and Maintenance: After-sales service that ensures the availability of the solutions, finding new challenges, and collaboratively developing new use cases that will increase the value of the solution over time.

In addition, while providing such one-stop solutions, the core product of our robot solutions, "OpreX™ Robot Management Core," centrally manages multiple types of robots and the data collected by the robots from the site. The "OpreX™ Plant Image Analyzer" provides added value by using AI technology to analyze image data captured and collected from the analog meters and level gauges in the site, and it can automatically record image data as process value data. Hence, this greatly improves the efficiency of the conventional method of manually checking and recording the data from on-site measuring instruments by a worker, thereby strongly supporting the reduction of manpower in the plant.

Yokogawa's robot solutions enhance the safety and efficiency of plant maintenance work, and support the first step toward the automation of plant operations.



## Areas for Exploration Disaster prevention

Areas where Yokogawa contributes

Improving health & safety

Case study of contribution

## Successful Deep Sea Observation of Sea Level Fluctuations with a New Type of Silicon Resonant Water Pressure Gauge —Adopted for Use in the Nankai Trough Seafloor Observation Network for Earthquakes and Tsunamis (N-net)—

Yokogawa, in collaboration with the National Research Institute for Earth Science and Disaster Resilience ("NIED") and the Earthquake Research Institute of the University of Tokyo ("ERI of Tokyo University"), conducted a field demonstration test to observe water pressure on the actual seafloor environment using an ocean bottom gauge equipped with a new type of silicon resonant pressure sensor\*1 off the coast of the Boso Peninsula, Chiba Prefecture, and successfully observed small sea level changes in deep sea.

Although it is difficult to obtain data on tsunamis, which are infrequent events, the changes in sea level similar to those of a tsunami were detected this time, and the water pressure gauge is expected to be used in the event of an actual tsunami. The water pressure gauge has been adopted for the Nankai Trough Seafloor Observation Network for Earthquakes and Tsunamis (N-net) to observe water pressure fluctuations on the seafloor caused by tsunamis generated by earthquakes, enabling reliable detection of tsunamis and contributing to damage mitigation.

NIED, ERI of Tokyo University, and Yokogawa have been jointly evaluating the performance of the water pressure gauge equipped with Yokogawa's silicon resonant pressure sensor using MEMS technology\*2 for use as a seafloor pressure observation, targeting performance that is unaffected by vibration or changes in the installation position of the water pressure gauge to ensure that accurate data acquisition is possible even in the midst of significant shaking that occurs during an earthquake. We have confirmed that the effect of changes in the installation position of the water pressure gauge is smaller than that of the conventional one.

A field demonstration test was conducted from August 23, 2021 to March 13, 2022 to evaluate the performance of the water pressure gauge in an actual seafloor environment. The water pressure gauge was installed on the seafloor at a depth of 3,436 meters off the coast of the Boso Peninsula in Chiba Prefecture. Japan and valid measurement data for 203 days were acquired. During the period of this test, we observed a 7 centimeter (cm) sea level change due to the eruption of Hunga Ha'apai volcano in Kingdom of Tonga on January 15, 2022. Further data analysis also confirmed that the water pressure gauge has sufficient performance to observe actual tsunamis, as it was able to

observe pressure changes equivalent to a change in sea level height of less than one centimeter (cm). This water pressure gauge is a made-in-Japan high-precision measuring instrument for deep-sea applications with high resolution and excellent repeatability\*3 of  $\pm$  0.005% of 70MPa or less, and has the same level of sensitivity as the most advanced overseas measuring instruments.

NIED has been developing N-net, a cable-type seafloor earthquake and tsunami observation system, in the sea area (from off the coast of Kochi Prefecture to the Hyuganada Sea) where no observation network has been established in the estimated source region of the Nankai Trough earthquake since 2019, aiming to directly detect and observe seismic motions and tsunamis with seismometers and water pressure gauges near the epicenter to improve real-time forecasts of ground motion and tsunami. The water pressure gauge plays an important role in this disaster prevention network system and will contribute to mitigating damage in the event of a Nankai Trough megathrust earthquake.

Tamisuke Yokogawa, the founder of Yokogawa and a pioneer of steel-frame construction in Japan, described the threat of earthquake disasters in his book "Earthquakes," such as "Earthquakes are the most dreadful of disasters and most to be feared. Magnificent palaces and precious treasures can be instantly destroyed or covered in mud and rubble," and continued to study the theme of earthquake-resistant buildings in the downtown area of Tokyo. Inheriting the spirit of disaster prevention from its founder, Yokogawa will continue to work with NIED and ERI of Tokyo University to improve the science and technology of disaster prevention, toward creating a society that is resilient to disasters.

- \*1 Silicon resonant pressure sensor: Yokogawa's silicon resonant pressure sensors employ a sensing method based on the pressure-dependent change in the resonant frequency of single crystal silicon resonators, and are characterized by low power consumption, compact size, high sensitivity, high stability, and high-pressure resistance.
- \*2 MEMS technology: Micro Electro Mechanical Systems technology.
- \*3 Repeatability: Precision of measurements under a series of conditions, including the same measurement location, procedure, operator, measurement system, operating conditions, and repeated measurements of the same object over a short period of time.

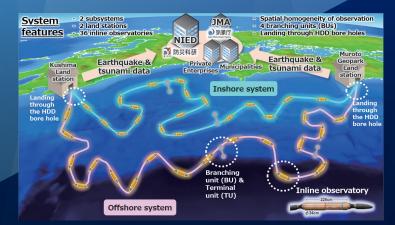


Image of the Nankai Trough Seafloor Observation Network for Earthquakes and Tsunamis (N-net) (Provided by: NIED)



Free-fall pop-up type ocean bottom pressure gauge equipped with the new water pressure gauge used for the evaluation on the seafloor (Provided by: ERI of Tokyo University)

A water pressure gauge equipped with a silicon resonant pressure sensor that uses MEMS technology (length 261.5mm)







# Social

- **27** Human Resource Management
- **30** Comfortable Work Environment
- **33** Occupational Health and Safety
- **35** Respect for Human Rights
- 37 Community Engagement



## **Human Resource Management**



## **Key Points of the Human Resources Strategy in GS2028**

Based on Yokogawa's Purpose of "Utilizing our ability to measure and connect, we fulfill our responsibilities for the future of our planet." we have set out a new medium-term business plan, Growth for Sustainability 2028 (GS2028). With this, we are aiming for growth through the provision of social common value. In order to create the future we aim for, each and every employee must become a "Customer-Oriented Value Co-Creation Promoter," with a mindset of taking on the challenge of innovation. Such employees would be human resources who can encourage alignment of direction and drive consensus-building through actions and collaboration among all kinds of stakeholders and their varying interests, whether inside or outside, in a way that is rooted in their specializations. We believe that human resources are the source of value. Through sustained human capital management, we will achieve both our business strategies and corporate growth alongside employee well-being and engagement.

## For the details on our Human Resources Strategy, see 2024 Yokogawa Report P.23.

## Improvement of Employee Engagement

## Importance of Employee Engagement

Yokogawa believes increasing sustainable employee engagement is essential to corporate value and sustainable growth. When employees are engaged, enabled and energized, they are independently and enthusiastically committed to their work and feel ownership of the achievements of the organization's goals, performance and ultimately the value provided to the company's stakeholders. Yokogawa helps each employee contribute by providing a work environment that supports productivity and performance while ensuring individual physical, interpersonal and emotional well-being at work. To understand the current situation, Yokogawa regularly conducts global employee engagement surveys, analyzes the results, and reflects the lessons learned in our strategies and improvement measures.

### Sustainability Goal: Sustainable Employee Engagement Survey Scores

In order to stress the importance of employee engagement, Yokogawa has declared employee engagement survey scores as one of our sustainability goals. Yokogawa's goal is to achieve a high-level of sustainable employee engagement on par with global high performing companies.

### 2023 Global Employee Engagement Survey, Results and Improvement Activities

In 2023, 94% of Yokogawa employees completed the Global Employee Engagement Survey. This is an extraordinary response rate and provides confidence the results accurately reflect the views of Yokogawa employees. The 2023 Sustainable Engagement score of 79% showed significant improvement from the 2022 score of 76%. However, it is still below the 2021 Sustainable Engagement score of 80% and Yokogawa's sustainability goal of 81%.

Moving forward, Yokogawa management will focus improvement activities on Efficiency, Strategy & Direction, and Diversity & Work-Life Balance. These Key Drivers have the biggest impact on employees' Sustainable Engagement.

- Efficiency: Yokogawa launched four transformation projects to strengthen global collaboration and optimize business processes. In these projects, we are working on reforms of our organizational structure, personnel system, and business processes that form the foundation of management, as well as the IT systems that support them.
- Strategy & Direction: Yokogawa will prepare strong and easily accessible communications about the new medium-term business plan.
- Diversity & Work-Life Balance: Utilizing more advanced programs and technologies for balancing employees' work and personal responsibilities will be encouraged continuously. All leaders to assign roles fairly considering diverse candidates and recognizing without bias each person's skills, experience, potential qualities and growth potential.

There is also a need to improve the connection between managers and employees. In this Post-COVID hybrid working environment, strong team communications is required. Yokogawa leaders will focus on enhancing their employees' sense of belonging by personally communicating and caring for each team member and by encouraging communication within and between teams, placing "Communication" and "teamwork" at the center of improvement activities.



## **Human Resource Management**

#### Proportion of women in managerial positions 20% (FY2030 target)



## DE&I (Diversity, Equity and Inclusion)

### Yokogawa's DE&I Statement

Yokogawa believes in building a culture that accepts, values and celebrates individual differences. Yokogawa is committed to providing an equitable and inclusive environment where everyone can belong, contribute, succeed, and demonstrate their full potential without fear of harassment, verbal abuse, or other behaviors that inhibit someone from fully contributing or harms their dignity. To achieve this, Yokogawa will actively recruit, develop, and promote people from a variety of backgrounds who differ in terms of experience, knowledge, thinking styles, perspective, cultural background, and socioeconomic status. We will utilize digital technology and cultivate an inclusive working environment to make it possible for every employee to demonstrate his or her full potential and work comfortably leveraging flexible workstyles. Engaging communication and constructive collaboration based on mutual respect facilitate innovation and the co-creation of new value for our customers, partners, suppliers, which, in turn, improves our planet.

### **DE&I Initiatives Around the World**

Yokogawa endeavors to foster a culture and workplace where employees have a sense of belonging and are respected and empowered to demonstrate their full potential. The following are some of the initiatives that are taking place in Yokogawa globally to continue to build a diverse, equitable and inclusive culture:

• In fiscal year 2023, Yokogawa also added a global DE&I web site that highlights Diversity, Equity and Inclusion activities and achievements.



- Yokogawa continues to conduct DE&I mindset trainings called "This We Believe" to deepen understanding of the importance of promoting diversity, equity and inclusion, as well as, recognizing unconscious bias and how it affects people's actions. Yokogawa also launched training programs for trainers to roll out "This We Believe" to regional headquarters.
- Human rights education continues to be a priority in Yokogawa. An e-learning based on the "Yokogawa Group Human Rights Policy" is available in multiple languages and over 80% of the employees have taken the course.
- Yokogawa conducted audits of human resource management systems globally, with DE&I as one of the policies reviewed.

## **Enabling Women's Empowerment**

Globally, Yokogawa is promoting women's advancement to leadership in the workplace. A goal of achieving a ratio of 20% Women managers by fiscal year 2030 has been set. At the end of fiscal year 2023, the Women Manager Ratio was at 14.5% which exceeded our target of 12.5%.

#### Europe

Yokogawa is hosting the Women in Business Mentorship



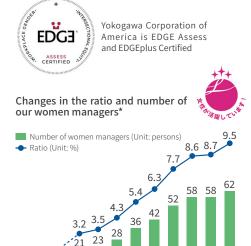
Program dedicated to the professional and personal development of women employees. The Mentees are benefiting from this development action with the support of Yokogawa women business leaders from around the world.

#### U.S.

Yokogawa Corporation of America was EDGE Assess and EDGEPlus certified. This assessment confirmed they have demonstrated their commitment to understand intersectional issues between gender equality, race/ethnicity and age.

#### Japan

Yokogawa is actively supporting women to achieve career success by providing Career Development training and assistance with formulating career development plans. Yokogawa is striving to convey a message to early career women that there is the possibility to be a leader in Yokogawa. Japan Campus Recruitment aims to optimize the ratio of men and women employees by targeting hiring a ratio of 30% or more women of campus recruits.



\*Originally employed by Yokogawa Electric Corporation

## Inclusion of Employees with Disabilities

#### Japan

Yokogawa group has consistently continued its activities to recruit employees with disabilities. Employees with disabilities engage in various fields, such as engineering, manufacturing, sales, and office work. In Japan, Yokogawa Foundry Corporation, a Group company, has been certified as a special subsidiary conforming to The Act for Promotion of Employment of Persons with Disabilities.

#### Korea

Yokogawa Electric Korea Co., Ltd. established an in-house cafe 'KOKORO' (heart in Japanese) where disabled employees work as baristas. The café improves the quality of the working environment and fosters a culture that accepts, values and celebrates individual differences. KOKORO is a cornerstone of expanding diversity and inclusion and is a space for Yokogawa Electric Korea Co., Ltd. employees and visiting customers to take a break, relax, and socialize.





## **Human Resource Management**

## **Human Resources Development**

A diverse workforce is an indispensable management resource and a key driver for Yokogawa's growth and creation of value.

To achieve the targets of the new medium-term business plan GS2028, Yokogawa is pursuing business transformation through strengthening of human resources and creating new value through co-innovation with customers. Moreover, to be a "Trusted Partner" and a "Respectful Citizen" to our various stakeholders, we will establish a framework that allows each employee to share in Yokogawa's Purpose and take on challenges to achieve their career goals, and we will continue to create a corporate culture that is rewarding to work in.

### Fostering a Corporate Culture That Inspires Employees to Grow with the Company

### Initiatives of Yokogawa University to Realize a "Learning Company"

With the goal of ensuring Yokogawa can continue to create greater value for our customers and society in a fast-changing world, in October 2018 we established Yokogawa University, an inhouse institution, to provide our employees with an environment to acquire and increase their level of expertise and skills in a broad range of areas. e-learning is used as the primary method of training so that our employees around the globe have an equal opportunity to learn without time or location constraints. At the same time, we are developing instructors to ensure the

availability of instructors at all our locations. Further, our officers also serve as instructors to participate in training for our employees.

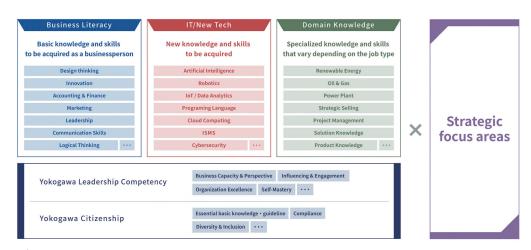
By offering employees opportunities to take on new challenges and helping motivated employees grow faster while cultivating a corporate culture where employees can learn from one another ("Learning Company"), Yokogawa aims to transform itself into an enterprise that is able to achieve sustained growth through employee growth and development.



A series of webinars on HR transformation, with officers as lecturers (hybrid event)

## Learning contents to Contribute to GS2028

Education programs are divided into three major themes: Business literacy, which is a set of basic skills in leadership, finance, and other areas expected of a professional; themes based on new technologies and other resources needed to create new businesses and transform business models; and themes based on functional areas of business such as sales and services needed to transform existing businesses and to impart knowledge. We provide 29,723 contents as of March 31, 2024, while also utilizing external e-learning. We also plan and conduct webinar series on HR transformation facilitated by our officers to improve employee engagement and foster a mindset to take on the challenge of transformation.



Yokogawa University Learning Categories

### **Global Talent Management System**

To sustain growth and enhance its corporate value over the medium to long term, Yokogawa is prioritizing the development of leaders who are capable of achieving success in the global business arena. To systematically recruit and develop global human resources and prepare them for managerial roles, in fiscal year 2018 Yokogawa established an organization to pursue a groupwide, strategic approach to human resources allocation and development. Moving forward, we will further expand our efforts to develop more leaders at an early stage.





## **Comfortable Work Environment**

### Promotion of Work-Life Management

Yokogawa promotes "work-life management," which enables employees with diverse backgrounds to balance and enhance their life events and work.

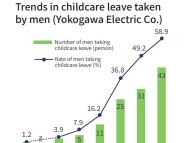
We will continue to maintain a system that allows each employee to self-motivate to take on highly productive work, and an environment that is flexible and easy to work in, where employees can concentrate on their work with peace of mind while responding to changes in the current stage of their lives, thereby leading to the sustainable growth of both the company and its employees.

In particular, for balancing childcare and work, we have established a system of working hours and paid leaves that exceeds the legal requirements in the process of pregnancy, childbirth and childcare, and we also provide financial support. In addition, by enhancing and spreading awareness of systems that make it easy to return to work after leave, and by fostering a workplace culture of understanding and mutual support, we have achieved a 100% rate of childcare leave taken by women, and the number of men taking childcare leave is increasing every year. Almost all those who take childcare leave have been able to return to work and are active in their jobs.

In recognition of these activities, Yokogawa Electric Co. has received "Platinum Kurumin Certification" from the Ministry of Health, Labour and Welfare since February 2021.

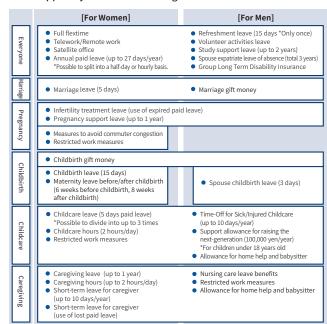


Platinum Kurumin mark



2018 2019 2020 2021 2022 2023 (EV)

### Main support systems for balancing life events and work



## Transformation of Work Style

While teleworking has become more widespread and has made it possible for individuals to achieve a better work-life balance, a heavy emphasis on telework can lead to issues such as a lack of daily communication and difficulties in passing on skills, thus there is a need to reevaluate the value of real communication.

Yokogawa's strengths are mainly built through real communication, such as on-site expertise, perseverance in tackling difficult projects, and overcoming challenges through teamwork. We have begun working on hybrid work that combines flexible teleworking with the principle of coming to a workplace.

In addition, we received certification as a "Great Place to Work" for the second time from Great Place to Work Institute Japan in November 2023.



#### Transition of work style measures









system started of use

of terms

Abolition Promotion Remote of terms work system of hybrid of use started work

### **Harassment Prevention**

Yokogawa works to prevent harassment and prescribes that "harassment is not allowed" in the Yokogawa Group Code of Conduct. In order to promote diversity and develop an environment where all employees can thrive, we revised the "Corporate Policy for Harassment" and established the "Harassment Prevention Guidelines" in fiscal year 2016, and we do not tolerate any harassment, including sexual harassment, power harassment, harassment that interferes with the use of pregnancy, childcare, and caregiving-related systems, stalking, and discriminatory speech and actions against sexual minorities (LGBTQ). We are working to ensure that all employees of Yokogawa Electric Co. and its group companies in Japan are aware of and comply with these policies.

In addition, Yokogawa Electric Co. has established the "Yokogawa Group General Hotline," and it functions as a contact point that employees of Yokogawa Electric and its group companies in Japan can receive consultations on various issues including harassment. When a consultation is made, we conduct the necessary hearings and investigations into the actual situation at the workplace, while taking into consideration the privacy of the person making the consultation. If it is found that harassment has occurred, we take strict disciplinary actions against the person who committed the harassment, and then implement appropriate guidance such as requesting measures to prevent reoccurrence. We ensure that employees seeking consultation and employees who contribute to fact-finding investigations will not be treated disadvantageously.

### **Comfortable Work Environment**

### Health and Productivity Management

In order for Yokogawa to provide sustainable value and lead the way in solving social issues, we believe it is important for diverse human resources to continue to grow and take on challenges with their own initiative. For this reason, it is essential to promote health and productivity management in which health is considered from a management perspective and strategically practiced. Our health and productivity management is aimed at helping employees autonomously maintain their health while improving their physical and mental health, satisfaction, and happiness in order to increase work engagement and productivity across the

In fiscal year 2016, Yokogawa formulated a Health Declaration as a basic policy for health and productivity management with the aim to further accelerate initiatives related to employee health. At Yokogawa Electric Co., with the President and CEO, and Representative Executive Officer assuming the ultimate responsibility and under the leadership of the management team spearheaded by Health and Safety Officers who serve as general safety and health managers, with the Health and Safety Committee as its core, the relevant departments of the Human Resources and General Affairs HQ take the lead in promoting health and productivity management in cooperation with occupational physicians and the Yokogawa Electric Co. Health Insurance Society and the Labor Union. The Company has worked on various initiatives under its policy relating to maintaining and improving the health of employees, including working styles that allow flexibility in work locations and times, creating employee-friendly office environments, management of working hours, and health improvement programs. As a result of these initiatives, Yokogawa Electric Co. has been continuously certified as an "outstanding health and productivity management organization\*" by the Ministry of Economy, Trade and Industry since fiscal year 2017. In fiscal year 2024, the Company was also certified as a "White 500 / Corporation for Excellent Health Management."

\*"Health and productivity management" is a registered trademark of Workshop for the Management of Health on Company and Employee.

#### **Health Declaration**

Yokogawa aims to be a company that supports its employees in their efforts to improve their physical and mental health, encourages the development of lively and stimulating workplaces, and contributes to society.





## Health Improvement Measures

Yokogawa Electric Co. has been running the Health Development Program as a measure to promote health since fiscal year 2015. In this, employees independently check their condition and are encouraged to provide self-care and improve their health. The program includes counting the number of steps in a one-week period, an interview with a physician on the day of the program (about exercise, diet, drinking, smoking, sleep, and cognitive habits, etc.), and the measurement of body composition and physical fitness. In addition, occupational physicians refer to findings from previous checkups and give each employee tips to improve lifestyle. Amid changes to work styles due to the COVID-19 pandemic, we reviewed the existing Health Development Program that operates under the assumption that employees work on-site at workplaces. We will roll out a new health improvement program

called "Let's Shine!" going forward from fiscal year 2022. We are implementing initiatives such as walking events to help employees feel connected to each other and learn healthy lifestyle habits in a fun way. From fiscal year 2024, "the on-site health counseling center" was newly established in workplaces with the aim of increasing each employee's interest in health and making the occupational health nurses more accessible counselors for employees. It is used by employees as an opportunity to think about their health and as a familiar place to consult.



Periodic "on-site health counseling

## Utilizing Data on Health

We started tallying and analyzing data from health examinations, stress checks, the Health Improvement Program, and work attendance in fiscal year 2020. The results are shared within the Health and Safety Committee and used in various health improvement measures. By implementing measures based on data to improve employees' health literacy, we aim to energize the organization and increase work engagement and productivity.

### Global Coverage

Yokogawa Electric Co. provides ongoing health support for expatriates and their families at overseas locations, including pre-relocation training on health management, vaccinations and medical examinations. from the time of relocation to the return home. In addition, each overseas company conducts activities that are suited to the actual conditions of each region and custom, etc. From fiscal year 2024, we have begun new initiatives such as creating opportunities for Yokogawa as a whole to think about health-related themes.

### Providing Learning Opportunities to Promote Mental and Physical Health

In order to promote employees' autonomous health behavior, we are working to raise their health awareness through e-learning, manager training, health education such as various seminars, various exercise-related events, health-related measuring events, etc.

## EAP for a Healthy, Fulfilling Company Life

We offer an Employee Assistance Program (EAP), which is designed to help employees maintain high performance and avoid a situation in which they are unable to demonstrate their full potential due to health problems and life changes. Under EAP, we establish a comfortable working environment while improving the program to adapt to the current situation and support employees to manage both their mental health (e.g., stress care) and careers (e.g., reinstatement support). It is our goal to ensure that all our employees stay in good health and enjoy a fulfilling company life.

#### Employee Assistance Program (EAP)

Education/PR	Utilize e-mail and web pages to provide relevant information that will help employees gain a better understanding of mental health.
Mental health training	Implement self-care, line care, training for new employees and managers, etc. in an effort to prevent or early detect mental health problems.
Stress check	Based on the results of the stress check, identify causes of stress in the workplace. Implement programs and activities involving the entire workplace to prevent, contain, and eliminate these causes so as to ensure a more comfortable workplace.
Health Promotion Program	We have a "Health Promotion Program" that focuses on improving lifestyle habits, especially exercise habits, with the aim of improving the physical and mental health of each employee. Exercise is believed to be effective in preventing not only physical illnesses but also mental illnesses, and we support our employees in improving their health by checking their own physical condition and taking care of themselves.
Consultation	We have a system to help our employees seek consultation within or outside the Company regarding not only mental health but also various areas of human relationships, career issues, sexual harassment, abuse of authority, and discrimination against individuals including LGBTs.
Support for employee's reinstatement to work	To care for employees who suffer from mental health problems or take a leave of absence, and to ensure the smooth reinstatement of those who return to work after recovery so as to prevent recurrence, we have a system to provide proper support for each individual and workplace in all stages of mental health response.

## Comfortable Work Environment

## Workplace Transformation

We are working on workplace transformation. aiming for a hybrid work style that combines flexible teleworking with the principle of office work. We create offices so that employees can choose the environment in which they work safely, securely, and autonomously. Spaces have been designed for a variety of uses, including a "place of solo work" to focus on one's own work, a "place of collaboration" to promote cooperation within the company, and a "place of relaxation" to facilitate the birth of new ideas.





"Place of collaboration" in an "Place of relaxation" where open environment people can take a break

### Workplace Transformation Challenges in the Software Development Workplace

An office in a software development workplace designed to allow different work styles instead of reducing the number of personal seats. The office has been renewed from a workstyle of sitting at one's own seat to one that allows employees to work according to what they do and their preferences.





Open solo work seats

Sofa booth seats suitable for meetings

## Introducing the Shared Office as a Third Place

Working in an office used to be the norm, but now working at home has become a part of our daily lives. Shared offices are being used so that employees can choose to work at locations other than the office or at home according to their own work schedule.

## Facilities Dedicated to Human Resources Development

Yokogawa has a "learning center" used for various human resources development, including new employee training. Room sizes vary to accommodate the number of employees in the training program. Suitable environments are provided for project activities and recruitment activities on the first floor, for training that requires imagination in an open atmosphere on the second floor, and for training that requires concentration in a relaxed space on the third floor.



Room with an open atmosphere on the second floor





Relaxed space suitable for group Learning center Yokogawa Campus training for large number of employees on the third floor

## Reception Spaces Symbolizing Yokogawa's Purpose and Co-innovating tomorrow

Reception spaces renewed in the image of the Yokogawa brand. Each room is designed differently with motifs of various natural elements. All rooms are available for both face-to-face and online use, but the first floor is designed to emphasize face-to-face use, while the second floor is designed to emphasize online use.





Reception rooms with different designs featuring motifs of the natural environment

Entrance with a spacious feel

## Building an Environment That Accepts Diversity

As our employees become more diverse, we are working hard to create an environment where everyone's "differences" are understood and everyone feels comfortable working.

#### Prayer rooms

We have set up facilities for employees who need to pray during working hours for religious reasons.

#### Break rooms for women

When communicating with employees in the middle of childrearing, they said things like "there's nowhere I can comfortably pump my breast milk," "I'd like somewhere to relax during pregnancy," and "it would be good to have somewhere to lie down a while." Establishing an equal opportunity workplace where employees can be treated with dignity and fulfill their potential is an important issue. In order to provide a safe working environment for women who are pregnant or in childcare, "break rooms for women" have been established as spaces where women can pump milk, manage their health, and relax comfortably.

We have prepared a refrigerator and freezer for storing breast milk and a microwave oven to sterilize the milk pump, thereby making it easier for women to choose to raise toddlers while working.



Prayer room



Break room for women

## **Occupational Health and Safety**

### Occupational Health and Safety Initiatives

The Yokogawa Group has introduced an Occupational Health and Safety Management System and seeks to continuously enhance the levels of activities related to occupational health and safety and promote risk reduction. With the goal of improving the performances of occupational health and safety activities, the Group is undertaking initiatives to eliminate and reduce potential risks identified through risk assessment and is regularly conducting internal audits of the Group companies to evaluate and review the initiatives. Yokogawa is also enhancing the effectiveness of the system by combining these initiatives with its existing activities, including analysis of and countermeasures against near-misses and health and safety patrol. We have designated risk assessment, occupational health and safety (OHS) training, and health and safety patrol as group-wide key activities and we monitor the activity times. From fiscal year 2024, as one of our sustainability goals, we have set a target to reduce the Total reportable incidents frequency rate\* to 0.40 or less by fiscal year 2030, and will work more strategically to reduce occupational accidents.

\* Total number of occupational accidents (Number of accidents with lost days + Number of accidents without lost days)  $\div$  Total actual working hours × 1,000,000

## Occupational Health and Safety Policy

In recognition that occupational health and safety are a basis for the management of the Yokogawa Group, Yokogawa shall pursue the following initiatives to promote, create and maintain health and safety for not only employees working within the Yokogawa Group but also contractors, temporary workers, and all others who work under our supervision.

- Establish an occupational health and safety management system, clarify roles, authorities, and responsibilities, and promote occupational health and safety management activities.
- Work to improve occupational health and safety by observing relevant laws and regulations as well as establishing the necessary independent standards.
- Seek to eliminate or lessen risks to occupational health and safety by first assessing their danger level.
- Establish occupational health and safety metrics and targets, and strive for improvement.
- Promote open communications with Yokogawa Group personnel, customers, shareholders, members of the local community, and contractors.
- Provide the education and training to all Yokogawa Group personnel to ensure occupational health and safety.
- Perform audits on a regular basis and make continual improvements in our occupational health and safety system.

## Operation of the Occupational Health and Safety Management System

With the goal of improving the levels of occupational health and safety in phases, the Group is undertaking initiatives to eliminate and reduce potential risks through risk assessment carried

out periodically or at the time of the change in operations, operating procedures or others as well as the implementation of countermeasures, while also conducting internal audits of the Group companies to evaluate and review the initiatives. The Occupational Health and Safety Management System is being operated while maintaining communication with people working at the Group, including temporary staff and contract workers. Yokogawa is also enhancing the effectiveness of the system and activities by combining its existing activities, including analysis of and countermeasures against near-misses and health and safety patrols.

In order to achieve higher effectiveness of our system and activities, we aim to have 12 principal locations certified with ISO 45001, which is the international standard for occupational health and safety management, of which 10 have been certified as of fiscal year 2023. In fiscal year 2023, one new location acquired ISO 45001 certification, raising the acquisition rate at production sites to 88%. We will continue to promote activities for achieving 100%.

#### Yokogawa Group Occupational Health and Safety Objectives

- Elimination and reduction of occupational accidents Secure safety and promote health of all personnel working for the Yokogawa Group.
- Establishment, maintenance, and improvement of the Occupational Health and Safety Management System
- (1) Make continual improvements in OHS activities, through implementation of PDCA cycle and sharing OHS activity information.
- (2) Conduct risk assessments in all Yokogawa Group companies, for eliminating or reducing risks.
- (3) Maintain and improve the current OHS level by carrying out internal audits.
- Observing laws and regulations
- Observe OHS-related laws and regulations.
- Conducting OHS activities (1) Activities to ensure safety as well as to maintain and improve health
- (2) Activities to build awareness of traffic safety
- (3) OHS training
- (4) Fire and evacuation drills
- Disclosure of OHS information

Communicate openly with Group personnel and the local community about OHS activities and results.

#### Occupational Health and Safety Management System Structure





## Total reportable incidents frequency rate\* 0.40 or less (FY2030 target)

#### \* Total number of occupational accidents (Number of accidents with lost days + Number of accidents without lost days) ÷ Total actual working hours × 1,000,000

## Occupational Health and Safety

## Occupational Health and Safety Education and Training

To maintain and improve the standards of activities throughout the entire Yokogawa Group and eliminate occupational accidents, we are committed to providing awareness activities for all group employees. We offer an educational program to reiterate the importance of preventing "slips, trips, and falls," as well as "Yokogawa QHSE Month," an awareness program related to quality, occupational health and safety and global environmental conservation. We also provide education targeting newly-appointed personnel in charge of occupational health



Evacuation drill (Yokogawa Electric Co.)

and safety activities, etc., hold workshops in the Health and Safety Committee, conduct training sessions for ensuring safety while performing tasks at our customers' plants, factories, etc., and give lectures on traffic safety, among others.

We have designated occupational health and safety (OHS) training as group-wide key activities and we monitor training times. In fiscal year 2023, we provided approximately 113,000 hours of OHS training in total across the Group.

## Yokogawa Safety Handbook

As part of our measures to eliminate and reduce occupational accidents, we published the Yokogawa Safety Handbook. Shared by the entire Yokogawa Group, the handbook is intended as a guide to help employees ensure safety and behave in a safe manner.

It comprises nine basic safety rules and three important practices on occupational health and safety. The nine basic safety rules focus on reducing the risk of occupational accidents. The three important practices introduce topics helpful in building and maintaining a safe workplace environment. The handbook was translated into nine languages and distributed to all staff members of the Yokogawa Group.



Yokogawa Safety Handbook

## Elimination and Reduction of Occupational Accidents

We have introduced a framework for reporting to Department in charge of OHS at the Yokogawa Group by the person responsible for OHS at each Group company in the event of an occupational accident or similar incident, including cases where temporary staff and contract workers are affected.

Under the guidance of OHS Manager, each Group company investigates the cause of the incident and implements measures to prevent recurrence. In addition, the lessons learned from occupational accidents are shared throughout the Group to prevent the recurrence of similar accidents.

In addition, to eliminate and reduce occupational accidents and improve the quality of health and safety activities, we aggregate and analyze data and information on occupational accidents on a quarterly basis.

In fiscal year 2023, the number and frequency rate of accidents with lost days involving employees and the frequency rate of occupational accidents including accidents without lost days were both flat. Considering that the number of Slip/Trip/Fall accidents is still large, we will take further measures to prevent such accidents in fiscal year 2024.

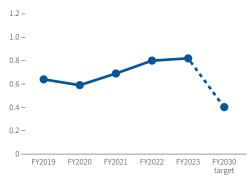
#### Total reportable lost time incidents frequency rate (Yokogawa Group)

Total reportable lost time incidents frequency rate = Number of accidents with lost days ÷ Total actual working hours × 1,000,000



#### Total reportable incidents frequency rate (Yokogawa Group)

Total reportable incidents frequency rate = (Number of accidents with lost days + Number of accidents without lost days) ÷ Total actual working hours × 1.000,000





## **Respect for Human Rights**

## Yokogawa Group Human Rights Policy

All of our business activities for value co-creation are based on respect for human rights. By deepening our understanding of the various human rights issues in the countries and regions where we conduct our business, and by being actively involved in resolving them, we must strive to ensure that people's dignity is protected and respected. We hereby establish the Yokogawa Group Human Rights Policy as a commitment to fulfill this responsibility.

- 1. Compliance with Human Rights-related Laws and Regulations and Respect for the International Code of Conduct
- 2. Implementation of Human Rights Due Diligence
- 3. Yokogawa's Priority Human Rights Issues
- 4. Communication and Engagement The Policy is disclosed on the Group's website.



For the full text of the Yokogawa Group Human Rights Policy, see our website.

## **Human Rights Management**

Yokogawa Group Human Rights Policy was established with the approval of the Board of Directors. We have established an internal system in which the President & CEO, Representative Executive Officer holds the greatest responsibility for human rights in the Group, and we are implementing ongoing efforts. We set up the Human Rights Working Group, whose members are selected from the departments related to human rights, under the umbrella of the Sustainability Committee to work on specific human rights initiatives.



For details regarding the Sustainability Committee, see P.58

### **Human Rights Due Diligence**

Yokogawa is committed to implementing human rights due diligence to identify, prevent, and mitigate potential negative impacts on human rights related to our business and the supply chain, and to achieve responsibility for our activities.

The Company has built internal control systems for the entire Group to reduce risks and correct problems identified in occupational health and safety, labor management, and purchasing and sales management.

### Human Rights Helpline and Remedy Procedures

To swiftly detect and rectify any human rights violations that we may have directly caused or be indirectly involved in, Yokogawa has established an in-house reporting and consultation desk for all persons working at Yokogawa, as well as a helpline for our suppliers. Furthermore, we accept reports from and listen to the problems of all stakeholders, including the general public and supply chains, about human rights violations through the "Contact Us" section of our website. Anonymous reporting and consultation are also accepted, and the helpline is available in Japanese and other languages. We operate the helpline in accordance with our rules set to protect the privacy of whistleblowers, secure confidentiality, and prohibit retaliation or any disadvantageous treatment. For human rights violations notified by our stakeholders, our corporate ethics, human resources, procurement, and legal departments will work together to investigate and take corrective action such as advising and educating those responsible to prevent the reoccurrence of similar cases.

#### Flow process of the Remedy Procedures



### Human Rights Risk Assessment

In fiscal year 2019, Yokogawa assessed the potential human rights risks in Yokogawa's business activities and value chain together with NGO's BSR (Business for Social Responsibility), a global NGO active in the field of business and sustainability. Then, in fiscal year 2022, we reassessed human rights risks based on changes in the external environment and the progress of internal initiatives.

This human rights risk assessment identifies human rights issues of high priority by confirming company policies, business activities, and the operating status of the internal control systems, as well as by interviewing relevant parties in the Group. The priority is determined from two perspectives: salience of the risk of causing an adverse impact through our business activities and business relationships, and Yokogawa's ability to manage the risks.



Social



### **Respect for Human Rights**

### Process of identifying the risk of violating human rights



Identifying the most relevant human rights for YOKOGAWA

### 2 Importance

Determination of the importance of human rights risk based on the severity of the risk and the possibility of its occurrence

### 3 Prioritization

Prioritize based on relevance, influence, and management status

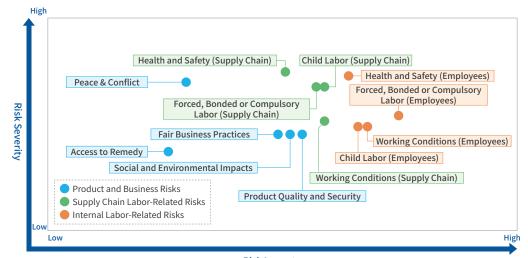
### Key stakeholders subject to due diligence:

Direct employees / Indirect employees, Women and girls, Children and adolescents, Communities, Migrant workers, Indigenous peoples, Workers in supply chain and Others (Rural population, Low income segments of the population, Segments of the population with low education)

### Human rights risks identified:

Product quality and security, social and environmental impacts, fair business practices, forced and bonded compulsory labor, child labor, working conditions (including freedom from discrimination, fair remuneration, freedom of association, right to collective bargaining), health and safety, peace and conflict, access to remedy

### Human Rights Risk of the Yokogawa Group



### **Risk Impact**

### **Major Human Rights Initiatives in Fiscal Year 2023**

### Conducting human rights due diligence for critical suppliers

We have used the expert's knowledge to identify critical suppliers. Specifically, we made judgments based on the size of the transaction amount and the content of the purchase (including services). We conducted human rights due diligence using SAQ (Self-Assessment Questionnaire) by suppliers for business sites of selected suppliers. Based on the assessment of SAO responses, we selected 18 high-risk sites and communicate (including face-to-face interview and interview with third-party organizations) with them to improve their situation.

### Revised Sustainable Procurement Guidelines

We have confirmed international standards for procurement and revised our Sustainable Procurement Guidelines. We ask our suppliers to ensure that they comply with the guidelines, and we also ask them to provide information and cooperate in our audits.

### • Education and awareness-raising programs on respect for human rights

As in the previous year, we provided training courses in multiple languages (English, Japanese, Chinese. Spanish, and Portuguese) and encouraged employees who had not finished training to take courses. In fiscal year 2023, we provided online training to new employees in Japan and started to offer e-learning contents appropriate to the needs of the Middle East region in cooperation with Yokogawa Middle East & Africa B.S.C.(C). We will continue to implement education in cooperation with each group company.

In conjunction with the World Human Rights Day, we issued a compliance Newsletter to all employees on the topics of "Human rights risks in business" and "Human rights in the workplace" to raise awareness of respect for human rights.

### • Human rights helpline and remedy procedures

In order to detect and correct human rights infringement events at an early stage, we have established a whistle-blowing hotline for employees and a helpline for business partners. Furthermore, we accept reports from and listen to the problems of all stakeholders, including the general public and supply chains, about human rights violations through the "Contact Us" section of our website. The whistle-blowing hotline is operated in accordance with Yokogawa's rules that provide for the privacy protection of reporters, securing confidentiality, and the prohibition of revenge on and detrimental treatment to reporters.



Social



## **Community Engagement**

Yokogawa strives for harmonious co-existence with local communities as a good citizen, recognizing that companies are also members of society. We not only contribute to society through our business, but also promote a variety of local contribution activities. The Company cooperates and contributes to the development of the common regional and social goals in all countries and regions where we operate our business.

We also support our employees to actively participate in local contribution activities as good citizens, and provide volunteer programs in which employees are able to have the most of their diverse skills and capabilities, including local human resources development and environmental conservation activities within ones communities.

### Policy for Corporate Citizenship Activities

Based on the Yokogawa Philosophy and the Yokogawa Group Code of Conduct, we engage in corporate citizenship activities by prioritizing fields related to our core business.

Priority areas

- Regions in which we conduct business
- Our business fields
- Large-scale disasters
- Contribution to social progress

### Guidelines for Corporate Citizenship Activities

Yokogawa Group has established the "Guidelines for Corporate Citizenship Activities" to promotes corporate citizenship activities accordingly. We ensure the transparency of our corporate citizenship activities that involve donations and expenditures by clarifying resolution/approval procedures and standards.

### Achievements of Corporate Citizenship Activities

Yokogawa's corporate citizenship activities for fiscal year 2023 took the form of funding (263.28 million yen), donations of goods and the opening of facilities to the public (equivalent to 4.25 million yen), and support activities by employees (equivalent to 21.91 million yen).

When classified according to SDGs, our activities related to Goals 3-promotion of health, and 4-education, are the largest in number of all the corporate citizenship activities in which we are engaged. Our activities contribute to 12 goals of the 17 SDGs.

When the Noto Peninsula Earthquake occurred in January 2024, we donated relief funds through a non-profit organization to support the affected areas. In recognition of our support for the Turkey-Syria earthquake that occurred in February 2023, we received the Medal with Dark Blue Ribbon, a Japanese national medal of honor, and the Golden Order of Merit from the Japanese Red Cross Society.

### Contributing to the Establishment of a Library for Children

Yokogawa Vietnam Ltd. supported the establishment of a children's library (Child-Friendly Library) at Van Con Elementary School. We have contributed with our business partners to develop the library's infrastructure as well as to donate books. Through this activity, Yokogawa Vietnam Ltd. motivates local children to read and learn and encourages teachers and parents to help children acquire reading habits. This social contribution activity contributes to SDGs Goal 4 "Quality education."



Children of Van Con Elementary School

### **Major Corporate Citizenship Activities and** Contribution to SDGs in Fiscal Year 2023

### Goal 1. No poverty

• Supplying food, socks, and toys to the poor and the vulnerable (USA)

### Goal 2. Zero hunger

Providing meals and livelihood support (Singapore and Turkey)

### Goal 3. Good health and well-being

- Blood donation activities (USA)
- Donations to support medical technology research (Japan)
- Vaccination activities and support (Saudi Arabia, Argentina, and Japan)
- Participating in breast cancer educational activities and charity events to raise funds (South Africa, Argentina, and USA)

### Goal 4. Quality education

- Donating books and bags to school children (Nigeria)
- Exchange meetings for young engineers, and design seminar contests for students (Japan)
- Providing grants for local institutes for education research and robotics students support groups (USA)
- Donating for STEM education to elementary school PTOs and development teams in high schools and universities (USA)

### Goal 5. Gender equality

• Supporting the empowerment of women (Japan, Bahrain, Saudi Arabia, UAE, Argentina, Brazil, UK, Netherlands, China, and USA)

### Goal 8. Decent work and economic growth

 Accepting three persons from Africa for internship for employment in accordance with African Union Agenda 2063 (Bahrain)

### Goal 10. Reduced inequalities

- Running a welfare cafe by hiring people with disabilities (Korea)
- Providing a grant for installing wheelchair ramp for families with disabilities (USA)
- Providing a grant to a library for the visually impaired for the preparation of Braille books (Turkey)

### Goal 11. Sustainable cities and communities

• Contributing to park protection organizations by participating in walking and running (USA)

### Goal 13. Climate action

• Tree-planting activities (China and Bahrain)

### Goal 14. Life below water

 Contribution to events that promote understanding and efforts to create a rich ocean (Japan)

### Goal 15. Life on land

Forestation activities (Japan)

### Goal 17. Partnerships for achieving the goals

• Joint research on biotechnology (Japan)



**Environment** 



# Environment

- **39** Environmental Management
- **41** Environmental Practices
- 42 Climate Strategy Response to TCFD
- Initiatives toward Achieving Carbon Neutrality
- **51** Environmental Initiatives at Business Facilities
- 53 Initiatives for Biodiversity Response to TNFD

## **Environmental Management**

### **Environmental Policy**

In accordance with Yokogawa's corporate philosophy "contribute to the realization of a sustainable society through broad-ranging activities in the areas of measurement, control, and information", we will promote environmental preservation activities to help realize a sustainable society and try to achieve our three goals for 2050.

- We will: Establish an environment management system, clarify roles, authorities and responsibilities, and promote environmental preservation activities.
- Prevent pollution by observing laws and regulations and, if necessary, setting voluntary standards.
- Promote environmental conservation by tackling environmental issues such as climate change, biodiversity, and use of resources and by setting environmental targets.
- (1) Pursue resource recycling management by endeavoring to save, reuse, and recycle resources, conserve energy, and prevent global warming, while reducing the risks of environmental pollution by minimizing the substances having a negative impact on the environment in all operations.
- (2) Develop and produce environmentally friendly products by evaluating the environmental impact throughout the product lifecycle from material procurement, manufacturing, distribution, and use to disposal.
- (3) Provide society with higher-value-added solutions and services that contribute to global environmental conservation through measurement, control, and information technologies.
- (4) Strive to co-exist with society as a good corporate citizen by participating in environmental conservation activities and encouraging employees to take part in voluntary activities.
- Provide all Yokogawa Group personnel with the education and training necessary to pursue environmental conservation activities.
- Disclose relevant information and promote open communications with Yokogawa Group personnel, customers, shareholders, members of the local community, and business partners to deepen

and cocreate environmental conservation actions and initiatives.

 Make continual improvements on the Yokogawa Group environmental management system by evaluating environmental performance and conducting audits on a regular basis.



### **Promotion Structure**

We promote environmental management globally through the consideration of measures and the review of activities by the people responsible for environmental management at each Group company in Japan and overseas, under the supervision of the environmental officer of Yokogawa Group.

### **Environmental promotion structure**



### **Environmental Management System**

The Yokogawa Group is implementing an environmental management system in the Group companies to ensure full compliance with the laws, regulations, and agreements for the prevention of environmental pollution. Moreover, we are working to reduce the impact on the environment by means such as saving energy and transitioning to alternative technologies with smaller environmental footprint.

Yokogawa has acquired ISO 14001 certification at its major offices and manufacturing sites as part of its effort to improve the environmental management system.

### Internal Audits

Internal audits for ISO 14001 are conducted at least once a year.

### Annual Audits

Regular audits (renewal audit or surveillance) are conducted once a year at each ISO 14001-certified Group company by a certifying organization in order to maintain ISO 14001 certification.

### ISO 14001 Certification at Yokogawa Group

The Yokogawa Group has achieved ISO 14001 certification primarily at its major offices and manufacturing sites in and outside Japan. Certification was obtained at 14 of the Group's 16 manufacturing sites, representing a certification rate of 88%.



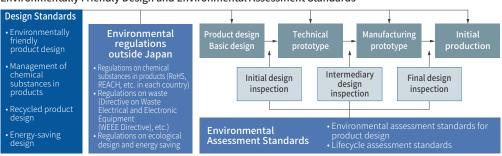
### **Environmental Management**

### **Environmentally Friendly Design**

Yokogawa actively develops environmentally friendly products through the implementation of its own strict standards of design and assessment for long-term usability, energy-saving performance and other aspects. New products are evaluated for energy consumption as well as the emission of carbon dioxide (CO<sub>2</sub>), nitrogen oxide (NOx) and sulfur oxide (SOx) based on our "Lifecycle Assessment (LCA) standards." Some of the evaluated products bear the LCA label, which shows the LCA results.

- (1) Environmental Assessment Standards for Product Design
  - We have established assessment standards in eight areas: ease of recycling and treatment, resource conservation, energy conservation, long-term usability, ease of collection and transport, safety and environmental protectiveness, information disclosure, and packaging. These standards are used in conducting assessments during each inspection (initial design, intermediate design, and final design).
- (2) Lifecycle Assessment (LCA) Standards
  - The LCA standards are used for preliminary assessments of energy use, CO<sub>2</sub> emissions, NOx emissions, SOx emissions, and the like throughout the lifecycle of a product. These standards are used in conducting assessments during each inspection (initial design, intermediary design, and final design).
- (3) Environmentally Friendly Product Design Guidelines These guidelines state for long-life design, energy-saving design, resource-saving design, design considering recycling and disposal, design considering processing and assembly, and the guideline for selecting materials and components.
- (4) Management criteria for hazardous substances contained in products Yokogawa has established chemical substance management categories to be the criteria for selecting environmentally friendly components and materials in the design stage.

### Environmentally Friendly Design and Environmental Assessment Standards



Banned Substance 1: Substances globally prohibited for use in products

Banned Substance 2: Substances nationally/regionally prohibited for use in products

Banned Substance 3: Substances prohibited for use in products for specific uses

Controlled substance: Substances whose content should be known and notified

- (5) Recycled Product Design Standards
  - These standards encourage the three Rs: the reduction of waste, the reuse, and recycling of used products.
- (6) Energy-Saving Design Guidelines
  - These guidelines state the matters to be ensured in energy-saving design in product use and manufacturing processes.

### LCA Label

Yokogawa began to conduct the lifecycle assessment (LCA) in 1999 in the design phase of all new products as part of efforts to minimize our products' environmental impact. Some of the results of the LCA are disclosed on our website. When LCA data is disclosed for a product, the applicable product is "LCA labeled" in the product webpage and/or sales brochure. This corresponds to Type 2 environmental labelling as stipulated by ISO 14021.



### Concept/Implementation of the LCA

Yokogawa has set its unique LCA standards based on JIS O 14040 "Environmental management -Life cycle assessment - Principles and framework." We compare a new product with our previous product for assessment purposes. The results of the LCA of the previous product are multiplied by the "functional factor" to compare the environmental impacts based on the equivalent functionality of the new product. When the results of the LCA on the previous products clearly suggest how these products would impact the environment, we may only conduct LCA on the elements significantly affecting the environmental impact.

### Requirements for LCA Labeling

A product will be LCA-labeled if it meets all the requirements described below:

- 1. Lifecycle assessment has been conducted according to Yokogawa's engineering specifications.
- 2. The results of lifecycle assessment are disclosed on the Yokogawa website according to the company's internal rules.



**Environment** 

## **Environmental Practices**

### **Data of Environmental Practices**

### Overview of Environmental Impact

Yokogawa calculates the eco-balance of its overall business activities, or the annual volume of the energy and material inputs for its business activities (including manufacturing, sales, and service) as well as their annual output of waste and other substances into the air and water. Analysis of the eco-balance helps us effectively use resources, raise energy efficiency, and improve the waste recycling rate.

### Compliance

In fiscal year 2023, Yokogawa continued its efforts to ensure full compliance with environmental laws, regulations, agreements, and other requirements. As a result, Yokogawa committed no major violations and faced no fines or other penalties resulting from such violations.

### Conserving Water and Soil

Yokogawa has been conducting soil and water surveys at former plant sites in accordance with its proprietary control standards since before the Japan's Soil Contamination Countermeasures Act came into effect.

### Awareness Programs

To raise employee awareness about global environmental conservation, awareness programs such as e-learning courses and seminars on quality, occupational health and safety, and global environmental conservation are offered to all employees of the Yokogawa Group.

### Eco-Balance (Annual Input and Output)

INPUT

OUTPUT

Er			
	Total Energy		1,100TJ
	Power	Purchased power	122,412MWh
	Power	Self-generated (Solar)	629MWh
		Light oil	601kL
- Energy	Petroleum	Gasoline	2,232kL
•		Kerosene	4kL
	Gas	City gas	1,895kNm³
	Gas	LPG	382t
	Heat	90GJ	
▲ Water	Utility water		356,041m <sup>3</sup>
o water	Ground water		153,014m <sup>3</sup>
	Paper		149t
	Hydrogen fluoride and its water-soluble salts		1.4t
	Hydrazine		1.8t
Substances	Butyl Cellosolve		1.9t
	Heptane		1.4t
	Xylene		4.9t
	Toluene		1.3t

Environmental Impacts FY2				
	Greenhouse ga	ses (GHGs)	57,375t-CO <sub>2</sub> e	
	NOx		3.7t	
Air	SOx		0.2t	
	Volatile Organic	Xylene	2.8t	
	Compounds (VOCs)	Toluene	0.7t	
<b>@</b>	Industrial wastewater		73,301m³	
Water	General wastev	351,481m³		
		Recycled	3,164t	
	Non- hazardous	Incinerated	404t	
<b>Waste</b>		Landfilled	597t	
waste		Recycled	425t	
	Hazardous	Incinerated	279t	
		Landfilled	7t	

Scope of data compilation: the Yokogawa Group

### **Environmental Accounting**

In accordance with the Ministry of the Environment's Environmental Accounting Guidelines 2005, Yokogawa calculates the costs of its environmental activities and their economic impact.

(Scope of data compilation)

Energy, greenhouse gas (GHG) emissions: the Yokogawa Group Others: ISO 14001-certified manufacturing sites

### Environmental Conservation Costs (FY2023)

(Unit:	millions	of ven

<b>2</b> 111110111101110111011101110110110110110				ons of yen,
Category	Item	Key Initiatives	Investment Amount	Cost Amount
Costs for within factory (business area costs)	Cost for Pollution prevention			84.0
	Cost for environmental conservation	Energy savings	1,679.2	753.5
	Cost for resource recycling Waste reduction, water conservation		0.0	135.8
Costs for reducing environmental impact of procurement and logistics (upstream and downstream costs)		Green procurement	0.0	16.4
EMS maintenance costs		EMS updates, education	0.0	176.1
Cost for environmental conservation in community activities		Environmental events	0.0	48.9
Costs for restoration costs (environmental damage response costs)		Soil remediation	0.0	0.0
	Total		1,726.1	1,214.7

### **Effects of Environmental Conservation Measures**

Category	Description of Effect	FY2022	FY2023	Increase/ Decrease
Innute	Total amount of energy consumed (TJ)	1,317	1,100	-217
Inputs	Water withdrawals (km³)	373	379	+6
Global warming prevention	Greenhouse gas emissions (t-CO2e)	67,085	57,375	-9,710
Outputs	Total amount of waste generated (t)	3,501	3,765	+264

### **Economic Effects of Environmental** Conservation Measures (FY2023)

(Unit: millions of yen)

Segment	Amount
Revenue from recycling (sale of valuable resources, etc.)	146.3
Reduction in expenditures due to resource and energy savings (power, water, paper, etc.)	193.7
Total	340.0



## Climate Strategy (Response to TCFD)

### Yokogawa's initiatives

As the world's population continues to grow, our society faces the challenge of reducing GHG emissions while continuing to provide the energy and resources needed by society. Yokogawa has set net-zero emissions as the vision for society in 2050 and listed "Achieving carbon neutrality" as one of the six contribution areas promoted in GS2028. Viewing curbing GHG emissions and switching to inexpensive, reliable, and sustainable energy as priority issues, we are reducing GHG emissions from our own operations and contributing to the spread of renewable energy and more efficient energy use through our business.

In GS2028, we brought our net-zero targets for GHG Scope 1 and 2 forward to 2030, and newly set a target of energy consumption intensity aimed at higher efficiency.

### **Support for TCFD**

Yokogawa is determined to proactively address climate change and prepare itself for the future, and it has expressed its support for the recommendations of the Task Force on Climate-related Financial Disclosures (TCFD), which was established by the Financial Stability Board (FSB) to promote the disclosure of climate-related financial information (February 2019).

### Climate-related Financial Information

### Governance

Governance regarding climate-related risks and opportunities

Recommended disclosures: a) Board of Directors' monitoring structure b) The role of management

### The Role of the Board of Directors

The Board of Directors formulates basic policies for addressing climate change and basic policies regarding the improvement of the system for managing risks and opportunities, monitors and supervises the effective operation of the system and appropriate response to sustainability issues. The Board considers the climate-related impacts while discussing business strategies and

In appointing Directors, we consider the overall balance of their knowledge, experience, and competences that are required to effectively fulfill the roles and responsibilities, and keeping a balance between diversity including gender, internationality, careers inside and outside the Company, and age, and an appropriate constituent number.

### The Role of Management and Execution

The Management Board, as the advisory body for the President & CEO, Representative Executive Officer who makes decisions on business execution, takes into account the impact of climate change in terms of both risks and opportunities when formulating business strategies and plans. The Management Board works to achieve the sustainability targets, including the targets related to climate change under the medium-term business plan, and reports progress regularly to the Board of Directors.

For group-wide risks including climate change risks, the Management Board has established the Risk Management Committee which deliberates and determines the priority management risks that should be managed preferentially at the Group level, monitors the management of these risks, and reports to the Board of Directors. As the chair of the Risk Management Committee, the President & CEO, Representative Executive Officer is responsible for overseeing all matters related to risk management.

The Sustainability Committee, which is chaired by the President & CEO, Representative Executive Officer has been established for the purpose of holding discussions specifically on sustainability. The Sustainability Committee conducts materiality analysis covering various issues related to climate change and GHG emissions, and discusses risks and opportunities related to climate change. The matters discussed by the Sustainability Committee are reported to the Board of Directors, and decisions are made in accordance with rules.



## Climate Strategy (Response to TCFD)

### **Strategy**

### Impact of climate-related risks and opportunities on businesses, strategy, and financial planning

Recommended disclosures: a) Medium to long term risks

- b) Impact on businesses, strategy, and financial planning
- c) Resilience of climate scenario strategies

### **Strategy Overview**

The clientele of Yokogawa's businesses is energy, chemical, and other manufacturing industries that greatly influence global GHG emissions. Yokogawa helps its customers reduce GHG emissions through its solutions that achieve stable operations, higher energy efficiency, and greater comprehensive business efficiency. In addition, we see it as opportunities to expand value provision in the renewable energy market, as well as to support utilization of clean energy (low-carbon hydrogen and ammonia), working to expand our businesses.

### Medium to Long term Changes of the Business Environment

Yokogawa analyzed the changes in the business environment around 10 years later regarding climate change from the perspectives of politics, economics, society, and technology. From the perspective of politics, we predict that laws and regulations will become more strict to respond to climate change and increased geopolitical risk caused by energy shortages due to a larger population. From the economics perspective, we predict a diversification of energy sources assuming the increased use of renewable energy, a shortage of food and water, and resource depletion. From the perspective of society, we predict that global warming will continue and that environmental pollution will be aggravated because of consumption rise along with economic growth. Also, from the perspective of technology, we predict that the structure of society will drastically change due to AI, IoT, and other digital technologies and that biomass materials contributing to resource recirculation will widely spread. Against those environmental changes, our customers are transforming into companies that operate lowcarbon businesses, including renewable energy, or that produce materials with little environmental impact, such as biomaterials, thereby increasing their business opportunities in those areas.

### Long-term Business Framework and Medium-term Business Plan

Based on the drastically accelerating change in the business environment, we aim for growth through the provision of shared value based on actions such as our response to climate change in the long-term business framework and are working to expand business by seizing business opportunities created by the transformation of our customers' business strategies based on renewable energy-related market growth and climate-related issues in the GS2028 plan. Yokogawa also helps its customers reduce GHG emissions through its solutions that achieve stable operations, higher energy efficiency and greater comprehensive business efficiency. In pursuit of GS2028, we have conducted a double materiality analysis, and defined our sustainability indicators based on the analysis results.

To achieve the sustainability targets, we are operating our main business, the Industrial Automation and Control Business, in three segments—Energy & Sustainability, Materials, and Life—and steadily expanding our business in these areas.

In the Energy & Sustainability segment, focusing on businesses for a decarbonized society, we are working to expand value provision in the renewable energy market and to support utilization of clean energy. In the Materials segment, we are supporting decarbonization of materials industries. In the Life segment, we contribute to productivity improvements throughout the value chains in pharmaceutical and food areas, as well as safe and secure supplies of pharmaceuticals and food that are necessary for adaptation to climate change. In the measuring instruments business, we support the improvement of the spread and efficiency of renewable energy and EVs.

In addition, aiming at carbon neutrality, we have set net-zero targets of reducing GHG emissions (Scope 1, 2 and 3) to net zero. These are ambitious long-term targets of reducing Scope 1 and 2 GHG emissions to net zero by fiscal year 2030, which was brought forward by 10 years from the original target, and Scope 3 GHG emissions to net zero by fiscal year 2050.

### Implementation of Internal Carbon Pricing (ICP)

Since fiscal year 2022, we have operated the ICP system to promote GHG emissions reduction measures that provide high economic rationale. When considering capital investment or energy procurement plans, we make decisions based on the impact of GHG emissions by converting the expected increase or decrease in GHG emissions into monetary values and taking them into account in financial decisions. We set a carbon price for the entire Group that targets the procurement of electricity from renewable energy sources, which greatly contributes to Scope 2 reduction and investment of manufacturing equipment. The Sustainability Committee deliberates on the ICP policy and carbon price and resolves them. We will apply the ICP to Scope 1, Scope 3, and business planning.



**Environment** 



### Climate Strategy (Response to TCFD)

### **Resilience of Climate Scenario Strategies**

When developing the long-term business framework and the AG2023 plan, we evaluated risks and opportunities and planned measures to address them in the 1.5°C and 4°C scenarios that we had established internally. In the GS2028 plan, although we made minor adjustments to assumptions of the scenarios, there are no changes in our fundamental strategies. In the 1.5°C scenario, along with the acceleration of the transition in energy caused by the increasingly strict carbon-free policies of each country, we predict the need for renewable energy and energy-conserving businesses, etc., will grow while fossil fuel business will shrink. In the 4°C scenario, we predict the expansion of disaster prevention solutions and pharmaceutical and food production-related businesses due to physical risks such as damage to business sites and supply chains in conjunction with increased flooding and other natural disasters and reduced yields of agricultural products and increase of diseases resulting from an abnormal climate. We have dug into these climate change-related risks and opportunities by business segment and risk type, developed response direction, and incorporated them into our business strategies.

### Main appartunities related to climate change

equipment

Classification	Business segment	Business strategies in GS2028	Business opportunities
	Energy & Sustainability business	Expanding value delivery for renewable energy market Partnership strategy with ESS (Energy Storage System) vendors, etc. Promoting labor savings, improved safety, and efficient operation management through remote integrated management using IoT Supporting utilization of clean energy (low-carbon hydrogen and ammonia) Supporting EX (Energy Transformation) for companies related to petroleum, gas, and fertilizers Applying technologies cultivated through the LNG field to hydrogen plants	-Supporting a high-quality and stable power supply by combining unstable renewable energy with ESS (Energy Storage System) -Improving power generation efficiency through high-efficiency combustion control -New initiatives for growing fields of low-carbon hydrogen and other energy resources, including green hydrogen/ammonia -Developing supply chain management solutions cultivated through the LNG field to the hydrogen field -Maintaining and gaining customers in the ammonia and other fields
Opportunities	Materials business	■Supporting decarbonization of materials industry (chemicals, steel)  •Providing emissions calculations and real-time monitoring for each product and organization in order to identify and analyze causes based on industry knowledge, provide reduction simulations, and achieve process decarbonization  ■Supporting optimization of mobility supply chain  •Providing our own real-time solutions and services to support productivity improvements throughout the supply chains of lithium-ion batteries, fuel batteries, etc.	•Supporting the process from the visualization to reduction of CO2 emissions Supporting energy saving, optimization, and automation throughout the supply chain, focusing on the production of minerals used in batteries and the manufacturing process
	Life business	Improving productivity and quality for pharmaceutical, food & beverage, biotechnology and industries  Realizing of a Smart Factory through improved productivity, cost reduction, and the provision of a safe and secure work environment in the pharmaceutical and food industries  Providing value through problem-solving solutions centering on manufacturing execution systems (MES)	•Understanding and reducing GHG emissions •Reducing energy consumption to reduce costs •Providing safe and stable supply of pharmaceuticals and food
-	Measuring Instruments business	■ Supporting the adoption and improvement of efficiency improvement of renewable energy and electric vehicles  • Providing energy efficiency measurement solutions for evaluating entire systems of renewable energy equipment and electrified mobility  ■ Supporting improved efficiency of next-gen communication systems  • Supporting the development of photonics-electronics convergence technology that enables all-photonics networks to contribute to the reduction of CO₂ emissions from data centers and communications	High-efficiency system designs that reduce CO <sub>2</sub> emissions with renewable energy and electrified mobility, such as EVs, to achieve decarbonization Next-generation communications innovation with optical and electric technologies converged, which enables expanding communication bandwidth and reducing heat loss

### Main risks related to climate change

	Classification	Type	Category	Key risks	Direction of response
			Policy and legal	Impact on businesses from the introduction of measures such as carbon taxes, taxes on fuel/energy consumption, and emissions trading	•Implement emission reduction plans to achieve targets for Scopes 1, 2, and 3 •Efficiently carry out investments and measures for
			iegai	Business opportunity losses due to changes in laws and regulations	decarbonization by expanding the application of ICP
	Risks	Transition risks  Market	Technology	Sales opportunity losses due to delays in technical development of new products and services aimed at a decarbonized society	•Accelerate the development of new products and services for carbon neutrality and expand existing products •Promote to development environmentally friendly products based on evaluations using the Lifecycle Assessment (LCA) standards •Pursue investments, including M&A and alliances, to acquire technology
			Market	Business opportunity losses due to delayed implementation of climate change initiatives in response to changes in the market environment	<ul> <li>Consider initiatives for environmental changes such as energy shifts and respond to changes in the market environment</li> <li>Utilize domain knowledge and digital transformation (DX) and expand the solutions portfolio</li> </ul>
			Reputation	The decline in Yokogawa's reputation and corporate value due to delayed actions in addressing climate change	•Improve information disclosure •Communication with stakeholders
		Physical risks	Acute and chronic risks	Impact on businesses from social disruption caused by climate disasters resulting from the impact of climate change, such as cyclones and floods (acute) and, changing weather patterns and rising average temperatures (chronic), as well as damage to business sites and impact on supply chains	Prevent, avoid, and reduce damage and impact through efforts such as information gathering within the Group and contracts with external organizations Conduct close supplier management and source from multiple suppliers Conduct regular risk assessments on major manufacturing bases and formulate and review business continuity plans (BCPs)

### **Assumed Climate Change Scenarios**

To address the uncertainty surrounding the effects of climate change, we are considering the form that society should take on by 2030, including our response in the 4°C scenario with severe, pervasive, and irreversible global impacts and the 1.5°C scenario where even stricter reductions in GHG emissions than the 2°C scenario and other efforts will be required.

### Inter-Company Collaboration on Climate Change

Yokogawa is participating in the Avelia program, one of the world's first blockchain powered digital book-and-claim solutions that provides clear and transparent tracking of Sustainable Aviation Fuel (SAF) and its environmental attributes utilization to help decarbonise Yokogawa's Air travel emissions. Developed by Shell & Accenture, Avelia allows airlines and corporates to share the cost and benefits of SAF and aims to support aviation industry's net-zero ambition. Yokogawa will contribute to the early adoption of SAF to help ramp up its use in the industry, as well as reduce its own greenhouse gas (GHG) emissions.



**Environment** 

### Climate Strategy (Response to TCFD)

### **Risk Management**

### Processes for the identification, assessment, and management of climate-related risks

Recommended disclosures: a) Risk identification and assessment processes

- b) Risk management process
- c) Process for integrating climate-related risks into overall risk management

### **Risk Management Structure**

We have established the Risk Management Committee as an advisory body to the President & CEO, Representative Executive Officer, to discuss matters related to risk management from a Company-wide standpoint and properly control their impact on Group management.

We define uncertainties that might affect the Group's corporate value (e.g., our external environment including climate change, strategies, product quality, environmental impact, crisis management, and corporate ethics) as risk. Based on our basic approach of integrally managing internal and external uncertainties relating to the business to maintain and increase the corporate value of the Yokogawa Group, we categorize and manage these uncertainties in terms of business opportunities, compliance, and crisis events.

### **Promoting Risk Assessment and Management**

Macroeconomic trends and large-scale disasters such as floods caused by climate change are assessed for all organizations including all Yokogawa Group companies and locations, and their outcomes are incorporated into the selection of priority management risks. As part of their independent risk management activities, each organizational unit of the Group including individual Group companies and locations, identifies and assesses risks every year, establishes countermeasures, and targets, and implements these countermeasures including risk reduction. Moreover, each organizational unit has a risk manager and a network for the Group's risk management.

Based on risk assessment and also in view of business strategies, management issues, and the external environment, the Risk Management Committee discusses and determines priority management risks whose management should be prioritized at the Group level. Priority management risks are reported to the Board of Directors. The content and progress of measures to address priority management risks are reviewed quarterly. Also, the Risk Management Committee assesses the status of risks semiannually, and reports the results to the Board of Directors. We also implement a review of measures and identify areas for improvement. These are, subsequent to factoring in the residual risks, reflected in the selection of priority management risks for the following year.

In risk assessment, we assess the severity of risks from the perspectives of impact and likelihood of occurrence: The risks assessed include business opportunity risks, e.g., external environment and strategies including climate change, compliance and crisis event risks, such as product quality, environmental impact, health and safety, corporate ethics (accounting fraud, bribery and other forms of corruption, harassment, etc.), information security (including personal information protection), and crisis management. When we assess the impact of risks, we also take into account the social and environmental impact of risks such as human rights risks and responses to climate change, as well as financial and human aspects. We take a comprehensive approach to assessment considering both bottom-up and top-down perspective, including changes in our management environment.

In addition, we have established the Crisis Management Committee chaired by the President & CEO, Representative Executive Officer, to respond to crises such as events, affairs, disasters, and accidents that may seriously impact management. When a crisis occurs by becoming apparent of risk, we will collect information, give instructions for quick and appropriate action, secure human safety, minimize economic loss, and fulfill the social responsibilities of the company.

The department in charge of internal auditing conducts an audit of the effectiveness of the internal control system and reports important matters to the Board of Directors and the Audit Committee.

### **Priority Management Risks**

In fiscal year 2023, we selected as one of Yokogawa's priority management risks "the risk of decline in Yokogawa's corporate value due to delayed implementation of initiatives related to sustainability management." We managed the selected risk based on the setting of a risk scenario in which we are behind the transformation speed of external environment in response to GHG emissions reduction toward a decarbonized society.



For details regarding Risk Management, see P.59.

### Risk identification

Identify uncertainties associáted with climate change on a single-year basis (short-term) and in the medium to long both risks and

### **Prioritization**

Prioritize risks considering financial and well as the impact

### Establishment of countermeasures/targets

and targets according to order of priority and factor them into a

### Implementation of countermeasures

according to the plan and check/ improve their effectiveness



### Climate Strategy (Response to TCFD)

### **Metrics and Targets**

Metrics and targets for assessing and managing climate-related risks and opportunities

Recommended disclosures: a) Metrics for assessment

- b) GHG emissions and related risks
- c) Targets and performance

### **Metrics and Targets**

Yokogawa has set the achievement of carbon neutrality through the reduction of GHG emissions and the transition to affordable reliable, and sustainable energy as a contribution area with the goal of achieving it by 2030.

We have set the target of reducing the CO<sub>2</sub> emissions from our customers' businesses by 1 billion tons (fiscal year 2018 to fiscal year 2030). It is a target we will work together with customers to achieve. We aggregate the difference between customers' CO2 emissions from renewable energy-related business or low-carbon energy production, and average CO<sub>2</sub> emissions from fossil fuels usage, then record it as a contributing volume.

To track GHG emissions performance at our business sites, we also set reduction targets for Scopes 1, 2 and 3, calculating emissions based on the GHG protocol methodologies. These targets are based on a GHG emission reduction level to limit the global temperature rise to 1.5° C over the pre-industrial level, which is one of the goals of the Paris Agreement. The targets were certified by the Science Based Targets (SBT) initiative in fiscal year 2022.

In GS2028, we brought our carbon neutrality targets for Scopes 1 and 2 forward by ten years to fiscal year 2030 and set a carbon neutrality target for Scope 3 to fiscal year 2050. In addition, increasing global demand for higher energy efficiency, as well as given accelerating GHG emissions reduction, increasing global demand for higher energy efficiency, and business efficiency enhancement for Yokogawa, we decided on a target for energy efficiency improvement.



Fiscal year 2030 target

Indicator	Fiscal year 2030 target	Fiscal year 2023 result
CO2 emissions control amount through customers	1 billion t-CO2 (50% or more from renewable energy and new technologies), cumulative total from FY2018 to FY2030	410 million t-CO2 in cumulative total (300 million t-CO2 from renewable energy)
GHG emissions (Scope 1, 2)	100% reduction by FY2030 (base year: FY2019)	27.2% reduction
GHG emissions (Scope3)	30% reduction by FY2030 (base year: FY2019)* 100% reduction by fiscal year 2050 (base year: FY2019)	7.8% increase
Energy consumption (Intensity per sales)	30% reduction by FY2030 (base year: FY 2023)	_

### Fiscal year 2023 target and result

Focus area Indicator		Fiscal year 2023 target	Fiscal year 2023 result
Supporting power generation by renewable energy	CO2 emissions control amount through customers (accum. from FY2018)	ough customers 500 million t-CO2 in cumulative total	
Supporting for distribution, storage and utilization of renewable energy	Sales growth rate of measurement instruments to renewable energy customers (base year: FY 2020)	2.2 times	3.2 times
	Growth rate of number of units shipped of battery electrode thickness gauges (base year: FY 2020)	1.7 times	1.0 times
(within Yokogawa) GHG	GHG emissions (Scope 1, 2) (base year: FY 2019)	10.0% reduction	27.2% reduction
reduction at Yokogawa sites and in supply chain	GHG emissions (Scope 3) (base year: FY 2019)*	10.0% reduction	7.8% increase

<sup>\*</sup>Emissions from purchased goods and services (Category 1) and emissions from the use of sold products (Category 11)

### Performance

In fiscal year 2023, the CO<sub>2</sub> emissions from our customers' businesses reduced since fiscal year 2018 amounted to 410 million tons, mainly due to growth in contribution to wind power generation. GHG emissions (Scopes 1 and 2) were reduced by 27.2% compared to fiscal year 2019 as a result of measures to reduce energy consumption, the conclusion of PPA for large-scale solar power systems for production sites, and a shift to electricity generated from renewable energy, etc. GHG emissions from the supply chain (Scope 3) increased by 7.8% in total of categories 1 and 11 compared to fiscal year 2019 as a result of increased emissions from purchased goods and services (Category 1), which are calculated with the amount purchased as the activity level, affected by an increase in the purchase amount due to exchange rate movements and rise in procurement costs. To achieve fiscal year 2030 targets, we will accelerate our efforts to reduce the power consumption of existing products and develop solutions and products with low GHG emissions, as well as review calculation methods and discussions with suppliers.



## **Initiatives toward Achieving Carbon Neutrality**

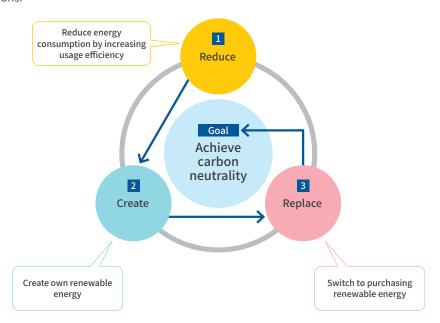


### Activities toward achieving carbon neutrality

Yokogawa has decided net-zero targets aimed at reducing GHG emissions (Scope 1, 2 and 3) to net zero, reflecting the steady progress of GHG emissions reduction. These are ambitious longterm targets of reducing Scope 1 and 2 GHG emissions to Net zero by fiscal year 2030, which was brought forward by 10 years from the original target, and Scope 3 GHG emissions to net zero by fiscal year 2050.

These targets are aimed at limiting the temperature increase to 1.5°C above pre-industrial levels and are in line with the agreement included at the 26th session of the Conference of the Parties to the United Nations Framework Convention on Climate Change (COP26): "to pursue efforts to limit the temperature increase to 1.5°C."

Yokogawa aim to achieve the targets for carbon neutrality through activities focused on three key efforts: "Reduce" our energy consumption and "Create" and "Replace" to reduce CO2 emissions.



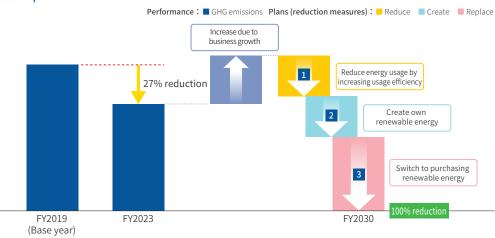
### Initiatives to Reduce GHG Emissions (Scope 1 and 2)

We have implemented group-wide measures to achieve the targets, and allocated reduction targets to the people responsible for each of the main organizational units and Group companies. We have also set rules for GHG reduction investments using our internal carbon pricing (ICP).

### **Group-wide Measures**

Energy-Saving (Reduce)	<ul> <li>✓ Improving energy efficiency by utilizing Yokogawa solutions</li> <li>✓ Improving equipment energy efficiency (air conditioning, lighting, HV, etc.)</li> <li>✓ Thermal insulation construction (improve shade and insulation efficiency, etc.)</li> <li>✓ Selecting higher efficiency means         <ul> <li>(improve production methods and select environmentally certified rental offices)</li> <li>✓ Operational management (efficient operation rule, educational activities, base load reduction, etc.)</li> </ul> </li> </ul>
Reducing the CO <sub>2</sub> emissions factor (Create and Replace)	<ul> <li>✓ Adopting renewable energy-derived power generation system (CAPEX or PPA)</li> <li>✓ Switching to renewable energy power contracts</li> <li>✓ Adopting CO<sub>2</sub>-free fuel or electrification</li> </ul>

### Roadmap





(Unit: t-CO2e)

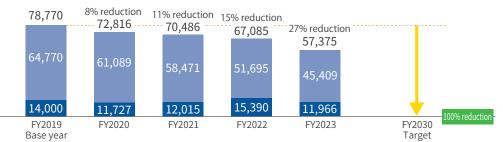
### **Initiatives toward Achieving Carbon Neutrality**

### GHG Emissions Reduction Target and Performance (Scope1,2)

In fiscal year 2023, we invested approximately 0.5 billion yen in implementing measures to reduce energy consumption, the conclusion of PPA\*1 for large-scale solar power generation systems for production sites, procuring electricity sourced from renewable energy, etc. This helped significantly lower the CO<sub>2</sub> emissions factor, thereby reducing group-wide GHG emissions (Scope 1 and 2) by 14% compared to the previous year or approximately 27% compared to fiscal year 2019, the base year. By implementing energy reduction measures at each group company, we reduced energy consumption\*2 by 17% from the previous year despite expanding our business from the previous year. We were also able to cut annual energy costs by 0.13 billion yen. This is an outcome from our efforts of promoting reduction strategies and enhancing technologies and knowledge on a group-wide level.

<sup>\*2</sup> A value converted into the primary side of energy







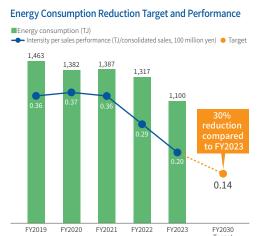
### **Reduce Energy Consumption**

### The setting of a Metric and Target for Energy Usage Efficiency

Yokogawa is planning to expand facilities for the purpose of the expansion and accelerating of our business toward fiscal year 2030, and anticipates an increase in energy consumption. Meanwhile, we need to continue generating more excellent value with smaller energy usage, because of increasing global demand for higher energy efficiency and a rise in energy procurement costs.



Yokogawa aims at higher efficiency on a group-wide level, with a metric of energy usage efficiency introduced, and has set a target of 30% improvement in energy intensity by fiscal year 2030 compared to fiscal year 2023. Pursuing "more efficient energy usage" and "value expansion" at the same time, we are working on initiatives to achieve the target.



### **Examples of Activities: Energy Consumption Reduction**

### Activity 1 | Energy Saving by frequency control of Air-conditioning fans in clean rooms on non-operating days

In clean rooms in Yokogawa Manufacturing Co. Kofu Factory, air-conditioning fans were operating 2 4 hours 365 days, at a constant frequency even on non-operating days for maintaining the cleanliness level. Finding room for energy saving, we decided to review the air-conditioning operation in clean rooms on non-operating days.

We installed the particle counters to measure cleanliness in clean rooms to appropriately control the frequency of air-conditioning fans for energy saving based on measurement results.

Specifically, the frequency of air-conditioning fans is set at a maximum output on operating days and at 50% of maximum output on non-operating days only when the number of particles is within the upper and lower limits of the threshold.

As a result, we have reduced energy consumption by 28.3MWh (53% of the reduction rate) during the year. It is obvious that this measure is horizontally applicable to clean rooms continuously operating, and this approach is broadly effective to facilities operating for long hours and over long periods. We consider changing the frequency of air-conditioning fans in clean rooms and also on operating days in the future to save more energy.

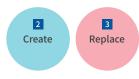
<sup>\*1</sup> Power Purchase Agreement



**Environment** 



## **Initiatives toward Achieving Carbon Neutrality**

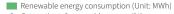


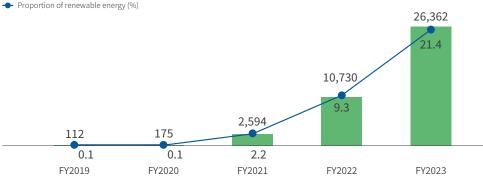
### **Procurement of Power from Renewable Energy Sources**

### Actual Consumption of Power from Renewable Energy Sources

As of the end of March 2024, renewable energy-sourced power is used across 25 sites in eleven countries: Germany, Netherlands, the United Kingdom, Belgium, Spain, China, South Korea, Thailand, Singapore, Australia, and Japan. The proportion of group-wide electricity consumption from renewable energy sources increased dramatically from 9.3% in the previous year to 21.4% in fiscal year 2023.

### Proportion of Renewable Energy Consumption to Total Electricity Consumption





### Examples of Activities: Procurement of Power from Renewable Energy Sources

### Activity 2 30% of Power from Renewable Energy Sources, Higher Cost Efficiency and **Acquisition of Green Factory Certifications**

At a factory located in Suzhou, China (Yokogawa Electric China Co., Ltd.), to achieve carbon neutrality, we are working to use renewable energy and reduce energy consumption under the leadership of top management. The solar power system installation was completed in January 2024 and began to operate in February 2024. 5,305 solar panels are installed in 8 places in the factory and the power-generating capacity is 2.918 [kWp]. The total generated electricity

On an annual basis, we expect the solar system will generate 30% of total electricity consumed. This will reduce 1,946t of CO<sub>2</sub> emissions in a year.

until May 2024 was 607.857kWh, accounting for 22% of total electricity consumed. In

addition, 144,000 yuan of electricity cost has been saved.

Besides the effect of CO<sub>2</sub> emissions reduction, it helps lower impacts from a blackout and electricity restriction. In addition, with government subsidies and saved electricity costs combined, we expect it to save 789,000 yuan of electricity cost in the first year and approximately 14,000,000 yuan during the 20-year contract period in total.

With the aim of strengthening the management of GHG emissions from the solar power system, the factory obtained certifications of ISO 50001 in July 2023, and ISO 14064 and ISO 14067 in April 2024. Moreover, with the solar power system introduced, the factory met one of the requirements for a green factory and obtained Suzhou Green Factory Certification in March 2024. For the next step, we are working to obtain Jiangsu Green Factory Certification.





### Activity 3 | Electrification by Replacing a Heating and Cooling System

Yokogawa Electric Korea Co., Ltd. has used absorption chiller-heaters fueled by city gas as its heating and cooling system for 18 years. However, there have been problems, such as water leaks, breakdowns, and energy losses due to the aging of the system. After a two-year design examination, we replaced the system with a heat pump system (ISC: inverter scroll chiller) in 2023, and thereby enabled electrification and a lower operation cost at the same time.

Different from the old heating and cooling system equipment which used city gas, this ISC(Inverter scroll chiller unit) is the new equipment which uses electric energy to deliver heating and cooling at a high level of efficiency. This measure follows "Replace."

included in Yokogawa Group's basic strategies on GHG emissions reduction and is the first electrification case in Yokogawa Group.

Construction work for the equipment began in October 2023 and finished in November 2023. During the 45-day construction period, all heating and cooling operations were stopped in Yokogawa Electric Korea Co., Ltd., and all areas of its headquarters building including the roof became construction sites. Total expenditure for the construction was approximately 350,000 US dollars, and reduced CO<sub>2</sub> emissions are 40t-CO<sub>2</sub> in a year. By shifting from city gas to electric energy, we expect a cost reduction of 550,000 US dollars for operation on an annual basis.





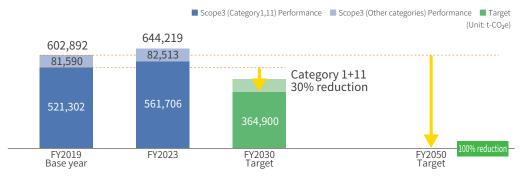
## **Initiatives toward Achieving Carbon Neutrality**

### GHG Emissions Reduction Targets and Performance (Scope3)

For GHG emissions (Scope3), use of sold products (Category 11) are calculated using assumed values of electricity consumed for products based on actual operations, which replaced maximum values of electricity consumed previously used for the calculation. For this reason, the presented figure of emissions in fiscal year 2019 (base year) is changed.

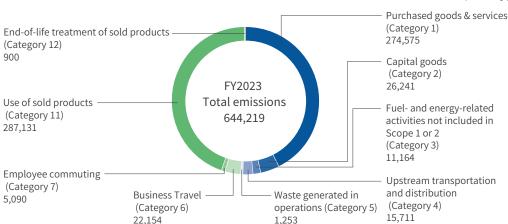
In fiscal year 2023, there was a 7.8% increase in total of categories 1 and 11 compared to fiscal year 2019 as a result of increased emissions from purchased goods and services (Category 1), which are calculated with the amount purchased as the activity level, affected by an increase in the purchase amount due to exchange rate movements and rise in procurement costs.

### **GHG Emissions Reduction Targets and Performance (Scope3)**



### GHG emissions (Scope3)

(Unit: t-CO<sub>2</sub>e)



### Initiatives to Reduce GHG Emissions (Scope 3)

To achieve fiscal year 2050 target, we will work to reduce GHG emissions by accelerating our efforts to cooperate with suppliers, reduce the power consumption of existing products and develop solutions and products with low GHG emissions, and review calculation methods for Category 1.

Purchased goods & services (Category 1): we are expanding our initiatives by activities, such as discussions with suppliers of procured goods and resale goods on the feasibility of introducing energy-saving products.

Use of sold products (Category 11): we are promoting design changes of existing products and energy-saving designs in developing new products.

It is difficult to reduce GHG emissions (Scope 3) in a short period of time, we formulate a roadmap and work from a long-term perspective to achieve our target.

### Science Based Targets (SBT) Certification

The Yokogawa Group's GHG emission reduction targets for 2030, we had announced from before, have been certified by the Science Based Targets initiative (SBTi)\*, an international environmental body, as science-based near-term targets consistent with the Paris Agreement goal of holding the increase in the global average temperature to well below 2°C above pre-industrial levels and pursuing efforts to limit the temperature increase to 1.5°C.

In fiscal year 2024, we are planning to acquire certifications of SBT long-term target and SBT net Zero, for our net-zero targets of reducing GHG emissions (Scope 1, 2 and 3) to net zero, and preparing for application.

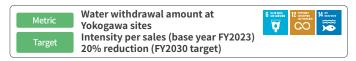
<sup>\*</sup> The SBTi was established jointly by the international not-for-profit environmental group CDP, the United Nations Global Compact, World Resources Institute (WRI), and the World Wide Fund for Nature (WWF). It aims to achieve the goal of the Paris Agreement by encouraging companies to set science based GHG emission reduction targets.



**Environment** 



## **Environmental Initiatives at Business Facilities**



### **Response to Water Risks**

In regions where securing water resource is a serious challenge, Yokogawa is promoting efforts related to water resources through measures such as monitoring water usage and securing alternative water resources.

Yokogawa Electric Asia Pte. Ltd., Yokogawa Engineering Asia Pte. Ltd., Yokogawa Electric International Pte. Ltd. (Singapore)

While Singapore has continued its efforts to ensure water self-sufficiency, it is expected that its total water needs will increase going forward.

Yokogawa's business site in Singapore is carrying out the following initiatives to maintain water resources and utilize alternatives:

- Comply with the guidelines set by PUB (Public Utilities Board) to avoid excess use of water.
- Use NEWater, a recycled water resource, for air conditioning systems.
- Install water-saving devices to washbasins and plumbing systems.
- Regularly check water consumption to find water leakage early.

### Yokogawa Middle East & Africa B.S.C.(c) (Middle East)

In Middle Eastern countries, water shortage is a serious problem. Yokogawa Middle East & Africa carries out the following initiatives:

- Set annual targets for reduction in water consumption per employee and manage the progress.
- Use normal tap water for non-drinking purposes.
- Comply with local regulations on water protection including conservation and contamination prevention.
- Increase employee awareness of water protection.
- Inspect any water leakages during the HSE (Health, Safety, and Environment) inspection tour at all facilities and take immediate corrective and preventive measures on any detected abnormality in the water supply system.

### Targets and Performances for Reducing Water Resource Usage

Yokogawa is working to reduce the amount of water usage by improving our production processes and introducing water-saving systems to our office water supplies.

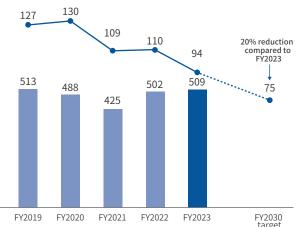
In fiscal year 2023, our water intake increased by 1% compared to fiscal year 2022 as a result of factors such as an upturn in the office attendance rate, an expansion of our business activities and a water leak.

We will try to curb the increase in water intake by improving production processes, and introducing watersaving devices.

Starting from fiscal year 2024, we will use the amount of water withdrawal per unit of sales as an indicator and strive to reduce it by 20% from the fiscal year 2023 level by fiscal year 2030.

### Water withdrawals Water withdrawals (Km³)





### **Effective Use of Resources**

Yokogawa is working to make effective use of resources by reducing, reusing, and recycling resources at our factories and offices, for example, in product packaging.

In fiscal year 2023, waste increased compared to the previous fiscal year due to office work style reform and disposal of equipment in Japan and the Middle East. Our Group companies will continue their efforts to reduce, reuse and recycle resources.

## **Total Waste Generation** (Unit: t) 4,876 4,692 4.513 4.383

FY2021

FY2022

FY2023

FY2019

FY2020





Waste sorting at the recycling center



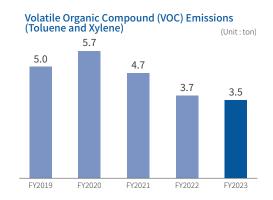
### **Environmental Initiatives at Business Facilities**

### **Initiatives for Chemical Substance Reduction**

Yokogawa places strict controls on chemicals that are harmful to humans and the global environment. In addition, Yokogawa is developing and introducing alternative processes in an effort to reduce chemical use and waste. Further, to comply with RoHS Directive restricting the use of certain chemicals in electrical and electronic equipment in Europe, as well as with the REACH Regulation (Registration, Evaluation, Authorization and Restriction of Chemicals), we are implementing initiatives for the reduction and proper management of such chemical substances.

### Volatile Organic Compounds (VOCs)

Yokogawa is engaged in reducing the emission of volatile organic compounds (VOCs). We monitor the toluene and xylene emitted from the painting and other manufacturing processes.



### PRTR Substances

The amount of substances reported under PRTR\*1 requirements (1,000 kg/year or more handled) is shown in the table below.

### PRTR Data (Fiscal year 2023)

Factory	Substance	Amount	Amount emitted (kg)				Amount transported (kg	
Factory	Substance	used (kg)	Air	Public water area	Soil	Landfilled	Sewage system	External site
Yokogawa Manufacturing Co. Komagane Factory	Hydrogen fluoride and its water-soluble salts	1,441	3	30	0	0	0	0
	Hydrazine	1,818	0	0	0	0	0	0
	Xylene	1,380	940	0	0	0	0	440
	Heptane	1,400	1,400	0	0	0	0	0
Yokogawa Manufacturing Co. Kofu Factory	Butyl Cellosolve <sup>*2</sup>	1,890	1,700	0	0	0	0	190

<sup>\*2</sup> Butyl Cellosolve: another name of ethylene glycol monobutyl ether

### **Example of Chemical Substance Reduction**

### **Reducing Chemicals Used by Thin-Gold Plating of Hermetic Terminals**

Yokogawa Manufacturing Co. has succeeded in reducing the thickness of the plating film in the gold plating process of hermetic terminals, which are core parts of its mainstay products, differential pressure

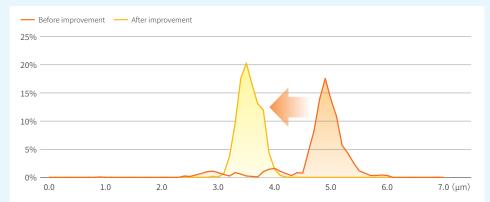
and pressure transmitters. This is because that manufacturing conditions can be shifted towards thinner plating by reducing the dispersion of plating thickness per processing unit (making the peak of the histogram of plating thickness higher) with the engineering of plating electrodes and jigs. As a result, we were able to reduce the amount of used chemicals by 10% per year.





Hermetic terminal

### Plating thin film before and after improvement



The horizontal axis indicates film thickness and the vertical axis indicates the percentage of hermetic terminals produced

After the improvement, the peak of film thickness was shifted toward thinner and also the dispersion was reduced.

<sup>\*1</sup> PRTR: Pollutant Release and Transfer Register. The PRTR was established to enable society as a whole to manage chemical substances through the disclosure of toxic chemical emissions data and other information.



# **Initiatives for Biodiversity (Response to TNFD)**

### Yokogawa with Biodiversity

The Kunming-Montreal Global Biodiversity Framework adopted in 2022 aims to conserve at least 30% of the land and sea by 2030. It recommends that companies disclose their impact on biodiversity as part of efforts to promote the preservation, recovery, and sustainable use of terrestrial ecosystems and achieve the sustainable management of forests. Companies are also required to consider impacts on biodiversity.

In its environmental policy, Yokogawa pledges its commitment to biodiversity issues. We have engaged in conservation activities for local biodiversity as part of our corporate citizenship activities together with local governments, local NPOs, and others. We also promote activities to assess impacts on biodiversity and to conserve it throughout the value chain. We ask our suppliers to promote biodiversity-friendly initiatives. In GS2028, perceiving trends in biodiversity as a business opportunity, we will contribute to biodiversity through our businesses by accelerating spreading renewable energy, water environment business, etc.

Seeing a growing interest in biodiversity, we examined impacts of Yokogawa's operations among upstream, our operations, and downstream in the value chain on biodiversity by reference to the TNFD's\*1 LEAP approach\*2.

- \*1 TNFD: Taskforce on Nature-related Financial Disclosures
- \*2 LEAP: Locate, Evaluate, Assess and Prepare approach

### Locate

Assess the dependencies and impacts of the industry sectors to which Yokogawa belongs, and locations at places in which significant dependencies and impacts are found, utilizing biodiversity assessment tools

### **Evaluate**

Evaluate the degree of major dependencies and impacts of the locations which are assessed as significant in the Locate step on nature, using environmental performance data

### Assess

Assess nature-related risks and opportunities arising from Yokogawa's operations in terms of magnitude and feasibility, using data obtained from the Locate and Evaluate steps

### **Prepare**

Set targets and organize monitoring methods on biodiversity conservation associated with Yokogawa's operations, based on analyses in previous steps

### Governance

Governance regarding nature-related risks and opportunities

### The Role of the Board of Directors

The Board of Directors recognizes biodiversity as an issue to be addressed. It formulates basic policies regarding the improvement of the system for managing risks and opportunities, monitors and supervises the effective operation of the system and appropriate response to sustainability issues.

### The Role of Management and Execution

Vice presidents take into account the impact of issues including biodiversity in terms of both risks and opportunities when formulating business strategies and plans. They work to achieve sustainability targets, including targets related to biodiversity.

The Sustainability Committee, which serves as an advisory body to the President & CEO, Representative Executive Officer, holds discussions specifically on sustainability. The Sustainability committee has conducted materiality analysis covering various issues related to biodiversity.



For details regarding the Board of Directors and the Sustainability Committee, see P.57-58.

### Strategy

Impact of nature-related risks and opportunities on businesses, strategy, and financial planning

### **Biodiversity Policy**

In its environmental policy, Yokogawa pledges its commitment to biodiversity issues and promotes activities to conserve biodiversity. Biodiversity is a foundation of sustainability in society. Together with our stakeholders, including customers, employees, suppliers, partners, and local residents near our business sites, Yokogawa engages in action throughout the value chain to conserve biodiversity while taking regional characteristics into account. We work to reduce any negative impacts resulting from our various business activities. This includes avoiding business activities near areas with important biodiversity. We also expand support for biodiversity through our businesses to contribute to creating a better environment in local communities.



**Environment** 



### Initiatives for Biodiversity (Response to TNFD)

### **Biodiversity Action Policies**

- Contributing to Biodiversity Through our Businesses We contribute to biodiversity by solving our customers' issues through the provision of products, solutions, and services utilizing Yokogawa's cutting-edge technologies.
- Cooperation with the Local Community to Enhance Local Value We take action in cooperation with government agencies and NPOs to acknowledge and enhance local value.
- Providing Employees with Educational Opportunities and Raising Awareness We raise awareness of biodiversity among employees by offering them relevant seminars and events.
- Considering Biodiversity Conservation within Business Sites We operate business sites while giving consideration to the ecosystem by, for example, managing their green areas.

### The Relationship Between Our Business Activities and Biodiversity

### Impact of Yokogawa's Business Activities on Biodiversity

Processes throughout Yokogawa's value chain risk impacting biodiversity. For example, processes from procurement to manufacture risk land alteration through mining, the GHGs emitted through processes from the supply to the use of products risk causing global warming and atmospheric pollution, and the disposal process risks impacting land usage and causing water pollution through landfills. We recognize the risk that the operation of Yokogawa's business sites may impact biodiversity in each region due to factors such as water emissions, global warming from GHG emissions, waste, landfill, and land alteration.

### LEAP Approach Analysis on Yokogawa's Operations

Yokogawa assesses connections between business activities and biodiversity throughout the value chain. In fiscal year 2023, we analyzed dependencies and impacts of, and risks and opportunities arising from Yokogawa's operations, in line with the LEAP approach of TNFD.

### Locate: locate contact points with nature

To locate nature-related risks arising from Yokogawa's operations, we utilized ENCORE\*1. We found out the risk of causing soil and water contamination due to our dependence on underground and surface water in the manufacturing business of electronic equipment (which falls under Electronic Equipment & Instruments of ENCORE). In the next step, we identified offices and production sites that are located in the areas carrying water-related risks, utilizing Aqueduct\*2.

### Evaluate: evaluate dependencies and impacts

We have evaluated water-related risks to our locations carrying such risks, which were identified in the Locate step. Based on evaluation results, we have also evaluated the magnitude of the risks, using Yokogawa's environmental performance data.

### Assess: assess risks and opportunities

Yokogawa has set targets of water withdrawal amount, and enhanced monitoring of water withdrawals and measures for the efficient usage of water resources. Yokogawa is working to reduce the amount of water withdrawal by improving our production processes and introducing water-saving systems to our factories and offices. Thus, we have judged biodiversity-related risks small.

### Prepare: response and disclosure

We have evaluated our dependencies and impacts on nature, and assessed the impacts of Yokogawa's operations on biodiversity as relevantly low. However, Yokogawa depends on nature in various aspects, and biodiversity directly or indirectly affects our businesses. For this reason, we recognize biodiversity as an important issue for us. Hereafter, we will assess impacts of the entire value chain on biodiversity and consider actions to risks.

### **Risk and Impact Management**

Methods for the identification, assessment and management of nature-related risks

We recognize biodiversity affects Yokogawa's business both directly and indirectly. It is included in the scope of group-wide risk management. Each organizational unit of the Group identifies risks and assesses the magnitude and feasibility of them, and formulates and implements countermeasures and targets. The Risk Management Committee regularly monitors significant risks. In addition, Yokogawa analyzes materiality, in line with the frameworks of the "Corporate Sustainability Reporting Directive (CSRD)." We have recognized that Yokogawa's business is associated with items, such as climate change, land alteration, usage of fresh and sea water, and atmospheric, soil and water pollution in a disclosure requirement ESRS E4 "biodiversity and ecosystems - direct impact drivers of biodiversity loss" set forth in the "European Sustainability Reporting Standards (ESRS)," in the aspects of risk and opportunity.



for information on risk management (risk management structure, promoting risk assessment and management), see P.59.

<sup>\*1</sup> ENCORE (Exploring Natural Capital Opportunities, Risks and Exposure): a tool to visualize how economies depend on and may affect nature, and how environmental changes bring business risks

<sup>\*2</sup> Aqueduct: a tool to assess water risks by region of the world, in terms of the risks of physical aspects (quantity and quality), regulations, and reputation



**Environment** 



## Initiatives for Biodiversity (Response to TNFD)

### **Metrics and Targets**

Metrics and targets for assessing and managing nature-related risks and opportunities

Yokogawa sets metrics and targets and promotes initiatives related to nature. We also disclose performance for these metrics and targets.

### Metrics for initiatives to mitigate the impact on biodiversity

Driver of nature change	Indicator	Target			
Climate change	GHG emissions	GHG emissions (Scope 1, 2 and 3)	See P.48 and P.50.		
	GIG ettiissiotis	Energy consumption	<b>◯</b> See P.48.		
Pollution/	Total amount of atmospheric	Total Waste Generation (actual performance only)	See P.51.		
pollution removal	pollutants other than GHG	Environmental pollutant emissions (actual performance only)	See P.52.		
Resource use/ replenishment	Water withdrawals and consumption from areas of water shortage	Water withdrawal amount at Yokogawa sites	See P.51.		

### Metrics for initiatives to contribute to biodiversity

Driver of nature change	Indicator	Target			
Climate change	GHG emissions	CO <sub>2</sub> emissions control amount through customers	• See P.46.		

A selection of the disclosure metrics indicated in TNFD that relate to Yokogawa have been presented above.

### case Internal Symposium "How We Contribute to Biodiversity Through Our Businesses"

Yokogawa has been reviewing its contributions to biodiversity through its businesses, and held an internal symposium, as part of activity of Yokogawa Green Volunteer, which is a framework of our corporate citizenship activities. First, we had a special lecture, inviting Associate Professor Shizuka Hashimoto from Graduate School of Agricultural and Life Sciences, The University of



Tokyo as a lecturer, to deepen our understanding of matters, such as international trends, factors in biodiversity losses and connections with climate change. Then, Yokogawa's employees presented initiative cases we work on in our businesses and held panel discussions with Associate Professor Dr. Hashimoto.

### case Approaches to Oligotrophication Issues of the Seto Inland Sea

The Seto Inland Sea, which is the largest enclosed sea area in Japan, contains a wide variety of fish and seafood, and fisheries are active in this area, including aquafarming of laver (edible seaweed), oysters, and fish. However, the Sea has a characteristic of being easily affected by human activities and accumulating contaminants. In the 1970s, the rapid economic growth era, a mass of industrial and household effluent drained into the Seto Inland Sea, thereby causing a water quality deterioration, and it was called the "dying sea."

As a result of that, the government established the Water Pollution Prevention Act (1970), and the Act on Special Measures concerning Conservation of the Environment of the Seto Inland Sea (commonly known as the Seto Inland Sea Act: 1973), to improve the water quality. This strictly restricted inflows of nitrogen, phosphorus and other contaminants into sea areas, which brought a significantly improved water quality with a higher degree of clearness.

On the other hand, it caused new problems emerging in fisheries, such as product value deterioration due to color fading of laver, and a lower fishery output.

In the background of the phenomenon, it has been discovered that there is a relationship between water quality and biological productivity in the seawater.

Life in the seawater forms a structure of pyramid which is a series of food chain starting with phytoplankton at the bottom. Hence, the concentration of nutrients including nitrogen and phosphorus, which are necessary for primary producers such as phytoplankton and seaweed, affects sea life. When nitrogen and phosphorus are excessively contained, phytoplankton massively proliferates to cause a red tide and other phenomena, which bring a mass mortality of sea life. When nitrogen and phosphorus are lacked, biological productivity in the sea declines, resulting in a lower fishery output.

Taking account of these phenomena, the government revised the Seto Inland Sea Act in 2021, and began addressing oligotrophication issues. In addition, Hyogo Prefecture formulated a plan for managing nutrient concentration in 2022, and set a lower limit value for nutrient concentration in the sea area. With the aim of balancing ecological pyramids, neither eutrophication nor oligotrophication, the government and prefectures have conducted various hypothesis verification tests to enable the balance.

Yokogawa agrees with the aforementioned various initiatives based on policy changes of the government and prefectures, from a beautiful sea to a beautiful sea with abundant sea life. We have cooperated for various projects and demonstration tests, including hypothesis verification. For example, we have developed an idea of integratively managing nutrient concentrations across an entire sea area by controlling the supply of nutrients while monitoring the species and quantity of phytoplankton. We are working on research and development about the idea by leveraging our ability to measure and our own knowledge, which are Yokogawa's core competencies.

Through such activities that would lead to the expansion of ecological pyramids, Yokogawa will make efforts to solve issues of biodiversity and food.

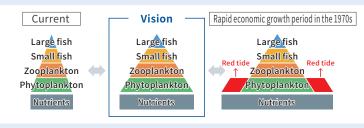


Diagram of ecological pyramids in the seawater (partial revision to material provided by the Hyogo Prefectural Technology Center for Agriculture, Forestry and Fisheries, Fisheries Technology Institute)





# Governance

- **57** Sustainability Governance
- Risk Management
- **61** Code of Conduct and Compliance
- **65** Supply Chain Management
- **68** Information Security
- **71** Privacy and Data Protection
- **Quality Assurance**



## **Sustainability Governance**

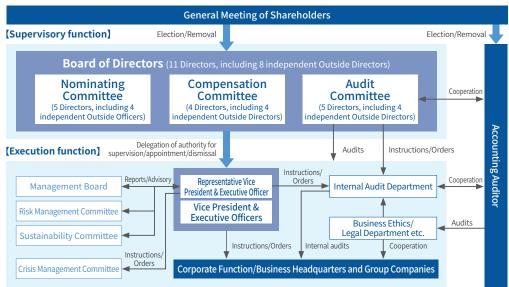
Yokogawa regards sustainability as one of our key management issues and is continuously working on the improvement of governance. Moreover, with the goals of achieving sustainable growth and earning the trust of every stakeholder through continuing contributions to society and environment in accordance with the GS2028 medium-term business plan, we monitor sustainability indicators and priority management risks. Our governance structure adopted the system of a company with a Nominating Committee, etc. since June 2024.

### **Corporate Governance Promoting Sustainability**

### **Basic Policy on Corporate Governance**

Yokogawa is striving to achieve sustainable growth for the company and to increase medium to long term corporate value under the Yokogawa's Purpose and Corporate Philosophy as the basic policy for sustainability initiatives. To maximize its corporate value, the Group has formulated the Yokogawa Corporate Governance Guidelines which serve as a basic policy for continuously working on corporate governance and discloses them on its website.

### **Corporate Governance Structure**



### **Board of Directors**

In accordance with the Articles of Incorporation, the number of directors shall be limited to no more than 15 with the majority being Independent Outside Directors. Directors who concurrently serve as vice presidents are limited to a minimum number. Furthermore, to ensure management practices backed by shareholder trust, director's term of office shall be a one year.

We organize the Board of Directors with the overall balance of their knowledge, experience, and competences that are required to effectively fulfill the roles and responsibilities, keeping a balance between diversity including gender, internationality, careers inside and outside the Company, and age, and an appropriate constituent number.

The Board of Directors is entrusted by shareholders to seek sustainable growth and increase the corporate value of the Group over the medium to long term. To achieve these goals, the Board of Directors positions sustainability initiatives as a key management issue, indicates the major direction of corporate strategies, while aiming to improve profitability and capital efficiency. In order to accelerate management decisions and business execution, decision-making on business execution is largely delegated to executive officers. Executive officers oversee the execution of duties, establish the basic policies for the internal control system in business execution, and monitor and supervise the construction and operation of this system.

### Main Sustainability-Related Agenda of the Board of Directors

- Progress of medium to long term sustainability goals including climate change
- Sustainability committee report
- Materiality analysis for the formulation of a medium-term business plan and strategies to expand contribution and growth
- Plan for non-financial data disclosure
- Yokogawa Group's priority management risks

### **Nominating Committee**

The Nomination Committee establishes the criteria and procedures for the selection, reappointment, and dismissal of directors and executive officers, ensuring that the desired qualifications (such as talents and achievements) and the selection process are optimal from the perspective of all stakeholders for the continuous development and corporate governance of our group. Based on the criteria and procedures, the committee deliberates and decides on proposals for the appointment and dismissal of directors to be submitted to the General Meeting of Shareholders.

### **Compensation Committee**

The Compensation Committee deliberates and decides on the remuneration system and compensation for directors and executive officers based on the prescribed criteria and procedures, ensuring that it encourages appropriate challenges for the development of our group, attracts and retains talented individuals, and is appropriate from the perspective of all stakeholders.

### Revision of the Executive Compensation System

In June 2024, the Compensation Committee revised the performance-based stock compensation plan (performance share unit plan) for executive officers. This revision aims to support the achievement of key management indicators emphasized in the medium-term management plan





### **Sustainability Governance**

"Growth for Sustainability 2028," provide incentives for the sustainable enhancement of our corporate value, and further promote value sharing with our shareholders. The Compensation Committee, held within three months after the start of each fiscal year, will deliberate and decide on performance targets for the next three fiscal years. Based on the achievement level of these performance targets, company shares and cash will be awarded. The performance targets include financial indicators such as ROIC (return on invested capital) and EPS (earnings per share), as well as sustainability indicators such as the reduction rate of greenhouse gas emissions (Scope 1, 2), reduction of energy consumption (intensity per sales), and employee engagement.

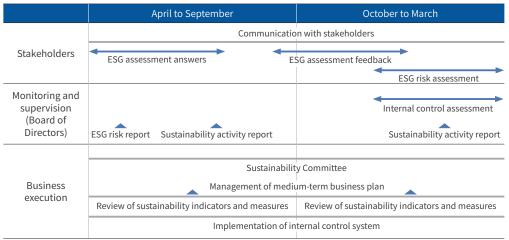
### **Audit Committee**

The Audit Committee is responsible for statutory duties such as auditing the execution of duties by directors and executive officers, preparing audit reports, and deciding on proposals for the appointment and dismissal of accounting auditors. From the perspective of directors, it primarily conducts high-value-added audits and validity audits.

### Sustainability Management

Sustainability management is conducted as part of the company's overall management cycle, which includes the medium-term business plan, risk management, and internal control systems. From the perspectives of contributing to society and environment while enhancing corporate value. Yokogawa identifies key sustainability issues, sets sustainability indicators to address these issues, and defines management cycles, with the Board of Directors monitoring and supervising the process. Non-financial items, along with reports on important matters and the implementation of each management task, are presented to the Board of Directors, and the status of sustainability activities is regularly reported.

### Sustainability Management Cycle



### Sustainability Committee

In fiscal year 2022, we established the Sustainability Committee with the aim of identifying priority issues from both corporate and social value perspectives, and formulating strategies to address sustainability issues and set the medium to long term direction of management. The Sustainability Committee serves as an advisory body to the President & CEO. Representative Executive Officer. with the President acting as chairperson and executive officers as members, providing a forum for intensive discussions on sustainability-related topics from a management perspective.

In fiscal year 2023, the Sustainability Committee (held twice) conducted a materiality analysis as a premise for the new medium-term management plan, confirming that the six contribution areas of high importance and issues to be addressed by the company (priority issues) remain unchanged since the formulation of AG2023. Additionally, under the Sustainability Committee, subcommittees by theme (Business Subcommittee, Product Subcommittee, Management Subcommittee, Disclosure Subcommittee) were established, where active discussions were held on various topics such as the stories of growing our businesses and contributing to society in business, sustainability initiatives in the product business, Scope 1, 2, and 3 reduction strategies, and non-financial information disclosure. The contents discussed in the Sustainability Committee are reported to the Board of Directors.



### **Product Sustainability Task Force**

To implement the strategies discussed in the Product Subcommittee of the Sustainability Committee into the business, we have established the Product Sustainability Task Force under the Product Subcommittee and have commenced activities. Key members from the product business division, production division, and procurement division participate in the Product Sustainability Task Force, focusing on initiatives aimed at promoting resource circulation and contributing to Scope 3 emissions reduction. For the time being, we will concentrate on the stages of procurement, product design, and product use, thus promoting environmental considerations throughout the product lifecycle and advancing our repair and calibration business, by leveraging the long-life design and high quality that characterize our products.

### **Kev Initiatives**

- Began to develop strategies aimed at reducing the environmental impact of our products and enhancing competitiveness, using European regulations as a benchmark
- Researched business opportunities on the replacement of products with a limited lifespan and repair services for our products, while identifying potential issues
- Promoted reduction measures targeting Category 1 and 11 of Scope 3





## **Risk Management**

The Yokogawa Group has in place within its organizational units a risk management structure to control uncertainty affecting its corporate value, an internal control system to ensure the appropriateness of the businesses and a crisis management system to respond promptly to any event that could seriously impact its operations.

### **Risk Management Structure**

We define uncertainties that might affect the Group's corporate value (e.g., our external environment, strategies, product quality, environmental impact, health and safety, crisis management, and corporate ethics) as risk. Based on our basic approach of integrally managing internal and external uncertainties relating to the business to maintain and increase the corporate value of the Yokogawa Group, we categorize and manage these uncertainties in terms of business opportunities, compliance, and crisis events.

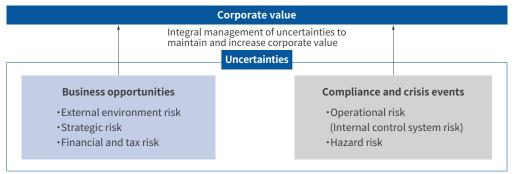
We have also established the Risk Management Committee as an advisory body to the President & CEO, Representative Executive Officer to discuss matters related to risk management from a Company-wide standpoint and properly control their impact on Group management.

### Promoting Risk Assessment and Risk Management

As part of their independent risk management activities, each organizational unit of the Group, including individual Group companies and locations, identifies and assesses risks every year, establishes countermeasures and targets, and implements these countermeasures. Moreover, each organizational unit has a risk manager and a network for the Group's risk management.

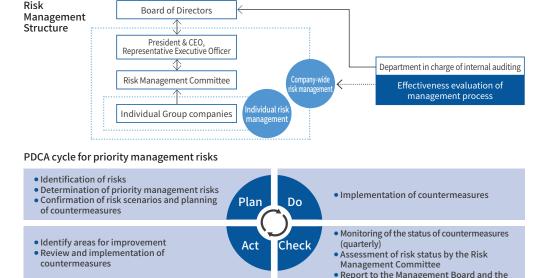
Based on risk assessment and also in view of business strategies, management issues, and the external environment, the Risk Management Committee discusses and determines priority management risks whose management should be prioritized at the Group level and reports to the Board of Directors. The content and progress of measures to address the priority management risks

### Basic Policy on Risk Management



are reviewed quarterly. Also, the Risk Management Committee evaluates the status of the risks semiannually and reports the results to the Board of Directors. We also implement a review of measures and identify areas for improvement. These are, subsequent to factoring in the residual risks, reflected in the selection of priority management risks for the following year.

In risk assessment, we assess the severity of risks from the perspectives of impact and likelihood of occurrence: The risks assessed include business opportunity risks, e.g., external environment and strategies including climate change, compliance and crisis event risks, such as product quality, environmental impact, health and safety, corporate ethics (accounting fraud, bribery and other forms of corruption, harassment, etc.), information security (including personal information protection), and crisis management. When we assess the impact of risks, we also take into account the social and environmental impact of risks such as human rights risks and responses to climate change, as well as financial and human aspects. We take a comprehensive approach to assessment considering both bottom-up and top-down perspectives, including changes in our management environment.



Board of Directors

### **Risk Management**

### Internal Control

Yokogawa has established and is operating an internal control system to promote management efficiency while ensuring the appropriateness of business operations, and to achieve continuous growth and increase corporate value.

The Group Management Standards (GMS) were established as the most important regulations within Yokogawa Group, clarifying the roles and responsibilities of each business process, and implementing an internal control system based on autonomous control activities. Among the internal control system, processes that are particularly important from the perspective of operational appropriateness are consolidated into a deployment system consisting of business ethics, decision-making, operating management, crisis management, and corporate auditing infrastructure. The system of overall responsibility for the Group has been established and is being operated. The person with overall responsibility for each process is tasked with managing, operating, and auditing the process, and works to ensure (i.e., maintain and improve) the effectiveness and efficiency of internal controls at each Group company.

In operating the internal control system, clear action plans are formulated and the PDCA is followed. The department in charge of internal auditing conducts an audit of the effectiveness of the internal control system and reports important matters to the Board of Directors and the Audit Committee.

### Escalation of the Information and Crisis Management System

In the event of a disaster, accident, or incident that could seriously impact the Yokogawa Group companies' management or endanger the lives of their employees, each Group employee must minimize the damage by taking prompt initial action and reporting to senior management. To address this issue, we have established the Yokogawa Group Crisis Reporting Guidelines, which stipulate details such as the information to be reported, as well as reporting routes and processes, and ensure that all Group employees are made aware of them. We regularly revise these guidelines and take steps to improve the escalation of information. In addition to these, we have established a Crisis Management Committee chaired by the President & CEO, Representative Executive Officer to ensure human safety, minimize economic losses, and fulfill our corporate social responsibilities in the event of a crisis.

### Business Continuity Management (BCM)

Yokogawa's business is closely tied to social infrastructure including electricity, gas, water, and sewerage infrastructure. To continue our business activities in the event of a natural disaster such as an earthquake, windstorm and flood, or anthropogenic disaster including accidents and take action as quickly as possible to help maintain and restore social infrastructure, we developed the Business Continuity Plan (BCP).

We developed response plans and action guidelines assuming risks that could seriously impact the Group's management, such as natural disasters including a huge earthquake, windstorms, floods, or an epidemic of contagious disease. We have been collaborating with Group companies worldwide to

improve these plans and guidelines. To increase the effectiveness and workability of our BCP, regular BCP training for the identification of problems is provided by members of the crisis management organization, including senior management, to continuously improve the BCP. In fiscal year 2023, we strengthened our ability to respond to various situations by conducting BCP training assuming a complex disaster of a huge earthquake and a huge typhoon in light of the increasing severity and frequency of windstorms and floods caused by climate change. In addition, we have also introduced a system to promptly check employee safety and provide regular training to enhance proficiency in using the system, while also offering education on the basics of disaster prevention and BCP in case of an emergency. These activities were put to good use in providing a prompt initial response to disasters including the Noto Peninsula Earthquake, which occurred in January 2024. To strengthen our resilience to potential cyberattacks, which have been increasing in recent years, we share the latest information and provide training for the management team every year.

### Protecting Global Employees from Crisis

Recently we have seen an increase in crime, terrorism, and violence occurring all over the world, including international travelers falling victim to crimes. In these circumstances, employees who are transferred to an international post or who travel abroad on business need to do more to prepare and take appropriate safety measures. To protect its employees working all over the world from crises (such as terrorism, riots, and crime), Yokogawa issues alerts. In addition, we hold seminars and provide education to help employees keep themselves safe when they are transferred to an international post or when travelling abroad on business.

### Training for Protection from Terrorism and Crime

Yokogawa invites outside security experts to provide instruction and demonstrations on various threats and how to deal with them, and conducts practical training involving the participation of the attendees in order to minimize damage in the event of a terrorist attack, riot or crime.



Cyber training in fiscal year 2023



Overseas safety demonstration training in fiscal year 2023



# **Code of Conduct and Compliance**

Yokogawa's top priority is compliance and it conducts its business activities in compliance with the relevant laws, regulations, and ordinances. We respect social norms and international guidelines, and act with high ethical standards. The Yokogawa Group Code of Conduct sets out the guidelines that its employees should observe in their actions for the realization of Yokogawa's corporate philosophy, while the Yokogawa Group Compliance Guidelines prescribe specific actions that each and every employee should take.

### The Yokogawa Group Code of Conduct

The Yokogawa Group Code of Conduct sets forth guidelines for all employees of the Yokogawa Group to observe in their actions. The Code of Conduct, a basic policy adopted by the Board of Directors, governs the overall structure of the Group Management Standards (GMS), which take precedence over all internal regulations and rules in the Group. Chapter 1 describes the Yokogawa Group's basic policies, including the realization of its corporate philosophy, compliance with laws and regulations, respect for human rights, and contribution to the realization of a sustainable society. Chapter 2 specifies the Yokogawa Group's ethical standards concerning the Group's relationship with stakeholders, workers' rights, and the responsibilities of the management team, among other things.



For the full text of the Yokogawa Group Code of Conduct, see our website.

### Yokogawa Group Compliance Guidelines

The Yokogawa Group Compliance Guidelines are practical guidelines that provide an easy-tofollow explanation of the Yokogawa Group Code of Conduct and describe specific actions that employees should take. The Guidelines have been prepared to educate employees and set forth the specific rules and standards that all Yokogawa Group employees should observe when they encounter ethical and legal issues in the course of their day-to-day business activities. The Guidelines have been translated into 14 languages, and we have taken multiple approaches tailored for employees with different styles of work to keep them aware of the Guidelines. Informing all Group employees of the content of the Guidelines enables Yokogawa to ensure that its corporate philosophy is embraced and upheld by each and every employee.





### Supporting International Guidelines The United Nations Global Compact

The Yokogawa Group Code of Conduct sets out six basic Group policies: the realization of the Yokogawa Philosophy, compliance with laws and regulations and cooperation with society, respect for human rights, fair business practices, contribution to society and the environment, and trust-based relationships with stakeholders. Yokogawa is committed to fulfilling its fundamental corporate responsibilities, including contributing to society through its business activities and ensuring compliance. In 2009, Yokogawa approved and signed the Global Compact, an international initiative proposed by the United Nations and has been endorsing and putting into practice its ten universal principles in the areas of human rights, labour, the environment, and the prevention of corruption. The Company shares these principles with its Group companies and business partners around the world. In addition, we are working with our stakeholders to uphold the ten principles through efforts such as participation in Global Compact Network Japan, a local network in Japan. The Global Compact was first proposed by former Secretary-General of the UN Kofi Annan at the World Economic Forum in 1999 and was officially adopted in 2000. Participating companies are expected to practice and uphold international standards for human rights, labour, the environment, and the prevention of corruption.



The ISO 26000 standard published by the International Standardization Organization in November 2010 is an international standard relating to the social responsibilities of organizations that presents seven core subjects including organizational governance, human rights, labour practices, environmental responsibility, and fair operating practices. Yokogawa is a company active in the global marketplace, and it adheres to the ISO 26000 standard and regards corporate governance as a foundation for corporate management. As such, we are committed to the implementation of socially responsible activities to meet our stakeholders' expectations, including contributing to communities through our business operations, environmental conservation, and respecting human rights.

Yokogawa Group Compliance Guidelines 2024 Yokogawa Sustainability Report 61





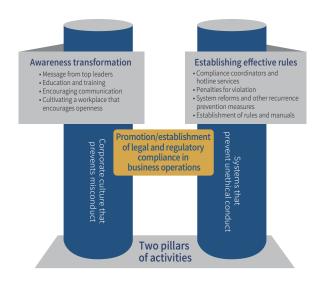
### **Code of Conduct and Compliance**

### Compliance Promotion Structure

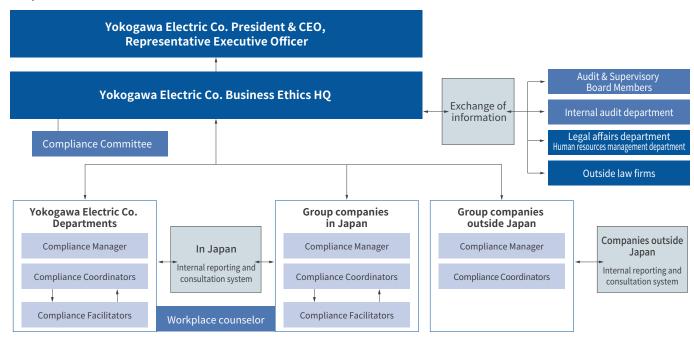
To prevent wrongdoing and scandal, Yokogawa promotes sound and transparent business activities with a corporate culture that prevents misconduct and systems that prevent unethical conduct as two pillars of our compliance activities. The Yokogawa Group aggressively promotes management practices built upon a foundation of compliance through the establishment of a business ethics department that is responsible for developing a compliance promotion structure and identifying and addressing issues pertaining to it. We have established a workplace-based compliance promotion structure in our global offices. The business ethics department and the departments or persons responsible for compliance at each company cooperate to pursue compliance initiatives to raise and establish employee compliance awareness.

### **PDCA Cycle for Promoting Compliance** Formulation of an annual Analysis of awareness surveys action plan based on survey Action review and results and review of the Plan Act problem analysis previous year Execution of action plan Implementation of Check Training activities

### Basic Approach to Thorough Compliance



### **Compliance Promotion Structure**



awareness surveys

Review of helpline operations

Awareness activities

· Establishment of rules and manuals

Appropriate helpline operations



### **Code of Conduct and Compliance**

### Anti-corruption Initiatives

Yokogawa is working to prevent all forms of corruption, including the abuse of power for personal gain, coercion and bribery, by prescribing within the Yokogawa Group Code of Conduct appropriate relationships with business partners, politicians, and government officials and prohibiting conflicts of interest. Specifically, we develop and implement rules such as the Yokogawa Group Compliance Guidelines and Yokogawa Group Anti-bribery and Anti-corruption Code and conduct education and awareness programs as part of our compliance initiatives to spread and entrench anti-corruption awareness.

### Anti-bribery Initiatives

Yokogawa observes the bribery prevention laws and regulations of all of the countries where its Group companies conduct business activities to prevent bribery involving public servants and private citizens both at home and abroad. The Group assesses and controls bribery-related risks. and the Group companies manage these risks. We prevent bribery and ensure that business activities are fair and appropriate, by fully informing all employees of the Yokogawa Group Antibribery and Anti-corruption Code. Further, we have established the Yokogawa Group Sustainable Procurement Guidelines to support the prevention of bribery and are working to implement the guidelines in cooperation with our business partners. No bribery-related violations or penalties were reported in fiscal year 2023.

### Measures to Prevent Anti-competitive Practices

Yokogawa considers that the observance of competition law is essential for ensuring the proper management of the Group and has set out its basic policy of fair, transparent, and free competition with competitors in the Yokogawa Group Code of Conduct. To further ensure compliance with competition law, we prescribe specific rules in the Yokogawa Group Compliance Guidelines and the Competition Compliance Code and provide in-house training about the competition law to increase employee awareness. No legal measures were taken against Yokogawa due to any anticompetitive acts, anti-trust law violations or monopolistic practices in fiscal year 2023.

### Measures to Counter Anti-social Forces

The entire Yokogawa Group is taking steps to eliminate antisocial forces and describes in the Yokogawa Group Compliance Guidelines its responses to anti-social forces that threaten social order and safety. In compliance with the Tokyo Metropolitan Ordinance for Eliminating the Organized Crime Groups, we are engaged in initiatives such as including clauses concerning the elimination of anti-social forces in business contracts and other agreements and signing a memorandum on the elimination of anti-social forces with business partners, contractors, and customers.

### Tax Policy

In light of the globalization of its business operations, Yokogawa believes it can fulfill its corporate social responsibilities and help realize a sustainable economy by properly meeting its tax obligations in the countries and regions where Yokogawa conducts business activities. Yokogawa takes the following actions in its tax accounting practices to ensure appropriate tax risk management.

- Placing the highest priority on complying with the tax laws and regulations of each country, and appropriately paying taxes without applying preferential tax treatment by interpreting beyond legislative intent
- Implementing appropriate tax-related accounting processes and other related measures
- Establishing a tax governance structure and striving to increase tax compliance awareness
- Responsibly performing tax duties in compliance with international tax standards such as the OECD Transfer Pricing Guidelines and the Action Plan on Base Erosion and Profit Shifting (BEPS\*)
- Conducting transactions with non-Japanese affiliates on an arm's length basis by properly allocating profit for their contributions in accordance with the roles and risk analysis of the affiliate
- Neither intentionally avoiding taxes by the act without commercial substance nor resorting to any abusive tax planning by utilizing low-tax jurisdictions
- Not utilizing any tax haven for tax avoidance purposes. Appropriately filling and paying taxes in case becoming subject to the CFC rules by effective tax rate reductions, legislative changes, etc.
- Optimizing tax expenses by means such as avoiding double taxation and utilizing appropriate tax incentives
- Reducing tax risk by obtaining advice from external professionals when there is uncertainty regarding the application or interpretation of tax laws and regulations
- Building, maintaining, and developing sincere, sound, and cooperative relationships with the tax authorities of respective countries
- \* BEPS: Base Erosion and Profit Shifting





### Code of Conduct and Compliance

### Preventing Insider Trading

To prevent insider trading, we have established the Code of Conduct for the Prevention of Insider Trading in the Group Management Standards (GMS) and have included a section on the prohibition of insider trading in the Yokogawa Group Compliance Guidelines. Further, we have established a group-wide compliance structure and provide education to thoroughly prevent insider trading. The officers or employees of the Group companies who intend to buy and sell Yokogawa Electric Co. stock must follow the prior approval procedure through the person in charge of insider trading prevention at their company. In addition, the following individuals are subject to a blanket prohibition regarding the buying and selling of the Company's stock from the last day of each quarter to the date of the announcement of the financial results for the quarter.

No insider trading was reported in fiscal year 2023.

- Officers and managers of Yokogawa Electric Co., Yokogawa Solution Service Co., Yokogawa Manufacturing Co., Yokogawa Test & Measurement Co., and Yokogawa Digital Co.
- People directly involved in the preparation and announcement of quarterly results in Yokogawa Electric Co. and the Group companies in Japan

### **Education and Awareness Activities**

Yokogawa offers a broad range of awareness programs such as compliance education and training, with the aim of fostering employees' awareness and understanding of compliance and a corporate culture that promotes fair, transparent, and open business practices with high ethical standards.



### Compliance Training and Education

In order to raise and establish employee compliance awareness in the entire Group, in fiscal year 2023, we included content such as "case studies of harassment scandals" and "the prevention of bribery" in the training for employees in Japan. We also conducted role-specific training at the time of on-boarding, promotion to manager, and other opportunities. In addition, the training is conducted in locations outside Japan. In China for instance, a compliance-related rules and regulations training which covered seven locations and approximately 350 employees participated was executed in fiscal year 2023.

### **Compliance Newsletter**

We publish Compliance Newsletter six times to communicate information about our corporate culture, recent business scandals, and other timely topics. The Compliance Newsletter helps improve employee compliance awareness through the internal publication of information for the entire Group. In fiscal year 2023, it highlighted topics such as business and human rights, the status of internal reporting and consultation hotlines, the results of the global employee engagement survey, and work engagement.

### Compliance Week

The Compliance Week campaign is conducted to ensure that the compliance mindset is embraced and upheld. In fiscal year 2023, we provided learning (e-learning) courses on the "Yokogawa Group Code of Conduct" and "psychological safety and compliance" for all of the employees of Yokogawa Group companies, solicited compliance slogans, and showcased them.

### Compliance Awareness Survey

In fiscal year 2023, we conducted an engagement survey for all employees of the Yokogawa Group to understand the current situation and improve employee engagement, and employees' compliance awareness was measured in the survey. We have confirmed that there is an improvement compared to the results of the previous survey conducted in fiscal year 2021, and the compliance field is one of the strengths of the Yokogawa Group, and our employees have a high awareness of our ethical standards.

### Contact for Whistleblowing and Consulting

Yokogawa has a contact for whistleblowing and consulting for the early detection and prevention of compliance issues. Employees can blow the whistle or consult on compliance issues anonymously or by telling their name by email, over the telephone, in writing or by any other means in their own language.

If any issue is reported and is likely to violate the Yokogawa Group Code of Conduct and/or be a compliance issue, then, the department in charge will investigate and try to resolve the situation in cooperation with a person in charge of the investigation appointed under the internal reporting and consultation rules, the human resources department, the legal affairs department, and the external

lawyer in accordance with the rules. We protect the privacy of whistleblowers and do not ever tolerate retaliation or any disadvantageous treatment of them.

We continue to try to fully communicate information about the internal reporting and consultation system and establish an environment that allows whistleblowers to report without anxiety.

We accept reports from and listen to the problems of our customers, business partners, community members, and all stakeholders about human rights and other aspects of compliance through the "Contact Us" and "Helpline" sections of our website. "Helpline" is available in multiple languages and can be used either with their actual names or anonymously. The helpline is operated in accordance with our rules set to protect the privacy of whistleblowers, secure confidentiality, and prohibit retaliation or any disadvantageous treatment.

No incidents that became issues that would significantly impact management were reported in fiscal year 2023.

### (Reference) FY2023 Breakdown of reports and consultations received in Japan Marketing/ sales-related 1 Intellectual property 26 and information 1 Quality-related 1-Workplace resources environment 2 management 4

(Reference) FY2023

Harassment 24

Quality-related 1 Intellectual property and information 1resources Finance nanagement (accounting/assets) 1 Workplace Marketing/

Breakdown of reports and consultations received outside Japan

sales-related 4





## **Supply Chain Management**

### Enhancement of Internal Control and Communications, and Promotion of Sustainability in the Supply Chain

Yokogawa has formulated the Procurement Process Standards for the entire Group as part of internal control. We are working to ensure fair and equitable transactions while taking account of sustainability. These initiatives are to apply to all processes involving our suppliers.

We contribute to the promotion of sustainability in the industry's supply chain as well as our own, through active participation in industry group committees such as the CSR Committee and the Procurement Committee of the Japan Electronics and Information Technology Industries Association (JEITA) and Global Compact Network Japan's study groups.

### Sustainable Procurement Activities

We ask our suppliers to observe the Yokogawa Group Sustainable Procurement Guidelines, which we created based on the RBA\* Code of Conduct, incorporating the approach of ISO 20400:2017 -Sustainable Procurement - Guidance.

We are working with our suppliers to identify risks that impede sustainable procurement, focusing on understanding the current state of the following four issues defined in the Yokogawa Group Sustainable Procurement Guidelines for suppliers: human rights and labor, health and safety, the environment, and ethics. In case a risk materializes, we work with our suppliers to make improvements. We also provide educational programs on sustainable procurement both inside and outside the Company.



\*RBA: The Responsible Business Alliance is a coalition of businesses that promote corporate social responsibility in global supply



The Yokogawa Group Sustainable Procurement Guidelines are on our website.

### **Action Plan and Results**

In fiscal year 2020, we started to conduct activities to reduce CSR risk in the supply chain, focusing on communication with the business sites of our suppliers through the Self-Assessment Questionnaire (SAQ) about environmental conservation and human rights.

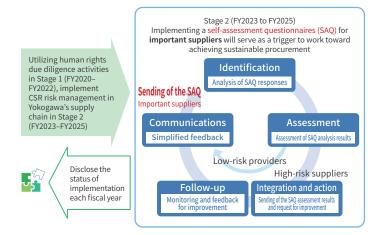
### PDCA Cycle for Activitie We transitioned from the results of Stage 1 (from fiscal years 2020 to 2022), which focused on due diligence regarding the protection of human rights, to Stage 2 (from fiscal years 2023) to 2025), which also considers environmental

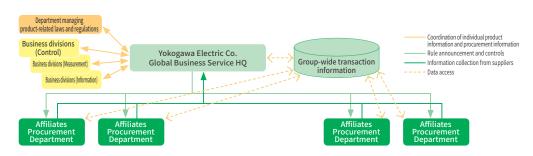
### Cooperation in Global Procurement

risks.

We engage in globally

coordinated supply chain management utilizing data integrated across the Group, while emphasizing our relationships with the suppliers of our affiliates in each country.





### Plan and Results of the Self-Assessment Ouestionnaire (SAO)

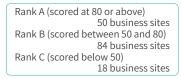
In the same way as Stage 1, under a three-year plan, we check group-wide transaction information, selected 600 key suppliers based on transaction amounts and items procured, and implement the SAQ for approximately 200 suppliers per year. Based on the responses obtained from the business places of our providers, we continue to analyze and evaluate supply chain risks.

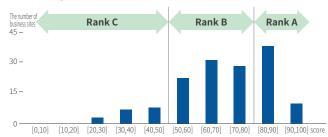


### **Supply Chain Management**

The SAQ in Stage 2 is expanded to questions on all aspects of sustainable procurement, such as human rights and labor, health and safety, the environment, and compliance. A score distribution of the business sites which responded to the questions is shown below. We also analyze trends in detail for individual items and utilize them for risk assessment.

### Total score distribution of the response received by 152 business sites





### Improvement Initiatives

To improve our activities together with suppliers, we ask them to agree to our sustainable procurement activities in the Yokogawa Group's supply chain. So far we have confirmed with about 80% of them.



We mark all of the responses to the SAQ and return each to the relevant respondent, together with the average score, a comparison

graph with our own and comments on points for improvement. We also confirm the subsequent improvements, depending on the score. For important respondents, we carry out individual interviews and present a detailed report on improvements. Further, we have confirmed that some business sites which responded to the SAQ in Stage 1 have improved in category of human rights and labor, health and safety in Stage 2.

### Sustainable Procurement Education

We have established an internal e-learning program about sustainable procurement, which employees are able to view on an on-demand basis. Procurement members from global locations gather to hold a study session using the handbook of the Yokogawa Group Sustainable Procurement Guidelines. Based on common



information shared within the Group, they are promoting engagement with suppliers in each country and supporting a deeper understanding of laws and regulations related to sustainable procurement and environmental policy.

### Promotion of Green Procurement

Taking into account the entire lifecycle of products/solutions to be provided to customers, Yokogawa encourages the purchasing of products and services with a small environmental footprint and promotes transactions with the suppliers who are proactively involved in supporting biodiversity and environmental action for the reduction of their environmental footprint and the increase of added value. We also consider contribution to the SDGs in our procurement strategy. For example, we use PCs with bioplastic casings as standard products for office equipment. Furthermore, we present the Yokogawa Group Green Procurement Guidelines when concluding transaction contracts with new suppliers. Having established a system to promote management of the chemical substances contained in our products, we investigate and manage the chemical substances contained in the materials and components we use for full compliance with the laws and regulations concerning chemical substances (such as the REACH Regulation, RoHS Directive, and TSCA). We also hold briefings as necessary to share information with and educate our suppliers.



The Yokogawa Group Green Procurement Guidelines are on our website.

### Strengthening of Partnerships with Suppliers

Yokogawa is reinforcing its partnerships by interacting with the management teams of key suppliers and their sales representatives at each location. For example, we regularly hold "Partners' Day" events to provide explanations on our management policies, business plans, and procurement strategies. These events also serve as educational platforms where we promote the understanding of environmental



policies and legal regulations related to the supply chain, using the "Sustainable Procurement Guidelines" Booklet.

We also organize component exhibitions and technical seminars by manufacturers to provide a forum for communication with developers.

### **Reinforcement of Compliant Procurement**

Yokogawa strives to reinforce compliant procurement across the Group by establishing standards for compliance in procurement to serve as group-wide management rules while maintaining close communication with those responsible at the Group companies. We also specify provisions concerning compliance in the business contracts. A helpline is available for suppliers to report actual or suspected compliance violations.





### **Supply Chain Management**

### Compliance with the Subcontract Act

In preparation for the revision of the operational standards of the Act against Delay in Payment of Subcontract Proceeds, Etc., to Subcontractors (the "Subcontract Act"), we have reviewed the bank transfer fees and the payment terms for electronically recorded obligations in subcontract transactions starting from 2024. Further, a lecture on the Subcontract Act changes its theme each year and is available on-demand in addition to the live streaming. In early 2024, in light of changes in the payment of subcontracts, we offered opportunities for approximately 3,000 employees in Japan involved in purchasing and payment to study the Group's original teaching materials linked to our own purchasing system, as well as short tests not only to raise awareness but also to prevent unintentional violations of laws and regulations. We also appoint compliance officers responsible for procurement in each department and each Group company to Procurement BCPgarding the Subcontract Act and build a compliance framework.

### Procurement BCP

Recognizing that ensuring a stable supply of the products our customers need is an important social responsibility, we are taking action in line with our procurement business continuity plan (BCP). To respond to the new laws and regulations implemented in each country in recent years, our global organizational units for procurement, with the cooperation of our suppliers, have been working together to manage information on the areas producing the components used in our products and understand the logistics situation, aiming to minimize any impact on our customers. In addition to short-term activities, we will also reform supply chain management from a longterm perspective by analyzing the procurement information of key components used in our major products and considering future situations.

### Initiatives on Conflict Minerals

### **Basic Policy**

Based on the Yokogawa Group Human Rights Policy, the Yokogawa Group, as a global company, seeks to prevent the serious risk of being complicit in human rights violations that may arise in connection with the mining, trading, and handling of minerals from conflict-affected and highrisk areas, and ensures responsible mineral procurement. With reference to the "OECD Due Diligence Guidance for Responsible Supply Chains of Minerals from Conflict-Affected and High-Risk Areas (OECD Due Diligence Guidance)"\*1 published by the Organisation for Economic Cooperation and Development (OECD), the Yokogawa Group has constructed a structure to conduct surveys on minerals in the supply chain, including measures such as sharing and checking information submitted through the Conflict Minerals Reporting Template (CMRT)\*2, and

manage the supply chain as a corporate group. With this structure in place, we are engaged in activities aimed at preventing the purchase of products containing minerals that are associated with risks such as human rights violations and bribery in conflict-affected and high-risk areas.

- \*1 The OECD Due Diligence Guidance's full name is the OECD Due Diligence Guidance for Responsible Supply Chains of Minerals from Conflict-Affected and High-Risk Areas.
- \*2 The Conflict Minerals Reporting Template (CMRT) is issued by the Responsible Minerals Initiative (RMI).

### Structure

With reference to the steps described in the OECD Due Diligence Guidance, the structure encourages the departments to set the roles suited to their function in the Yokogawa Group's addressing the conflict mineral issue. We cooperate with our suppliers to investigate the use of conflict minerals in certain products based on customers' requests. If an investigation reveals that a mineral procured by Yokogawa is a source of funds for armed groups, we immediately take measures to avoid the use of the mineral in question.

As a member of the Responsible Minerals Trade Working Group run by the industry group Japan Electronics and Information Technology Industries Association (JEITA), we coordinate our efforts with those of other corporations in the industry and obtain the latest information. The latest information and standardized procedures for investigating conflict minerals are shared throughout the Yokogawa Group.





# **Information Security**

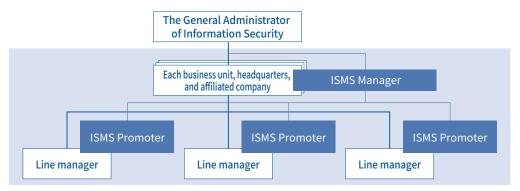
Yokogawa works together with customers to provide solutions. To protect important information entrusted to us by our stakeholders, we implement information security measures from three perspectives: people, equipment, and information technology (IT).

### Information Security

Yokogawa conducts information security activities based on the concept of the ISO 27001 standard. The general administrator of information security who serves as the officer in charge of information security management control notify each business unit, headquarters, and affiliated company of policies and measures. A secretariat conducts on-site inspections to monitor operations to ensure they are performed in line with rules and takes necessary improvement measures.

To ensure information security, Yokogawa has developed an information security structure at each of its business units, headquarters, and affiliated companies. All organization draws up an action plan at the beginning of year and checks the level of the organization using a maturity confirmation check sheet at the end of the year. In addition, it implements a PDCA cycle, which is the key to smooth information security promotion activities.

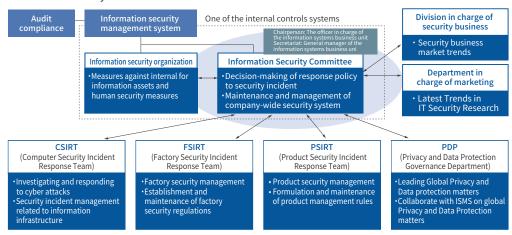
### Information security organization



### **Information Security Committee**

In conjunction with the above, Yokogawa also has an information security committee to improve its responses to cyberattacks and ensure that customers are able to continue their business activities safely and securely.

### Information Security Committee



### **Response to Cyberattacks**

Cyberattacks show no sign of slowing down and are becoming increasingly sophisticated. To prevent cyberattack risks, the Computer Security Incident Response Team (CSIRT) act effectively.

In recent years, the damage caused by ransomware has increased worldwide, and in 2023, cyber damage caused by ransomware attacks occurred frequently in Japan, and many companies and organizations were attacked. Yokogawa has investigated the vulnerability information of its own systems and networks and confirmed that there were no problems.

And partnership with other departments is vital as many people are involved when responding to an incident. In 2024, we will continue to build a framework to respond to urgent incidents and improve the response capability of CSIRT.

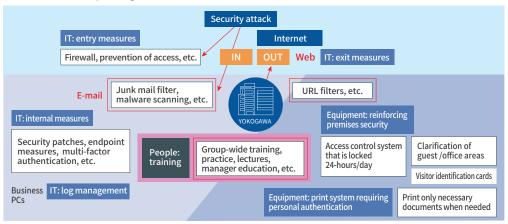


### **Information Security**

### Yokogawa's Security Management

In order to properly manage confidential information, it is necessary to be in a state where it can be objectively recognized as confidential. Yokogawa sets confidential information classification for confidential information and manages them according to classification. In addition, in order to protect confidential information, we are working on information security measures from the three perspectives of People, Equipment, and IT.

### **Information Security Management**



### People: Information Security Training

To protect information, every individual employee should be aware of information security. Yokogawa provides training using e-learning to all its employees every year to enable employees to think for themselves about the handling of information they receive and appropriately act. We share up-to-date knowledge regarding information security, and publish internal bulletins whenever necessary to keep our employees informed of responses to security incidents and recurrence prevention measures based on actual events. Further, we provide more practical information in the form of lectures on information security featuring expert lecturers, as well as education and training on responses to targeted attacks, phishing, BEC(Business Email Compromise), response to internal fraud. In addition, we facilitate education for line managers as well as mobile users according to access & role. Information security audits are also conducted to check whether the results of this training are reflected in day-to-day information security activities.

### Equipment: Easy-to-understand and Secure (Security of Office Premises)

Information security must be easy to understand. We have clarified the areas that employees and visitors are permitted to enter. When a visitor enters an area other than a guest area, the visitor must wear a visitor identification card. We protect property and information assets on the premises of the head office using an access control system that keeps the office area locked 24 hours a day. Moreover, we have introduced a managed print service (MPS) that requires personal authentication for the printing of only the necessary documents at the time they are required, preventing documents from being left behind on printers or mixed in with other documents.

### IT: Protection Behind the Scenes

We use IT to prevent human error such as accidental leaks and the inappropriate use of information due to a lack of knowledge, and also adopt a multi-tiered approach to prepare for external cyberattacks. In response to cyberattacks, which are diversifying day by day, we obtain the latest vulnerability response information, regularly check the Security Scorecard's evaluations and tune the settings of our security equipment to maintain the standards we have set for ourselves. And install a private SOC(Security Operation Center) using cloud and machine learning technology. Thereby, we are striving to prevent unauthorized access and early detection of signs and incidents. In addition, this private SOC technology is the foundation of OpreX™ IT/OT Security Operations Center service.



### **Information Security**

### Security Management for Products and Services

The Yokogawa Group recognizes that the continuous provision of measures to address cyber threats is important to its customers and society and is committed to addressing security together with its customers through the provision of its products and services.

In view of the recent rise in the risk of cyberattacks, countries around the world are requiring a higher level of security for critical infrastructure and progressively codifying these requirements in law and regulation to maintain public order and safety. Likewise, in many business fields, it has become necessary to regard the risk of cyberattacks on a broader horizon with perspectives that encompass factors such as digital transformation and supply chain management. For companies, ascertaining this risk and improving countermeasures for cyber threats have become urgent tasks from the standpoint of ensuring business continuity.

In this context, we endeavor to apprehend and understand legal regulation in each country and security trends among international security standard and industry association. We actively pursue activities aimed at providing products and services that conform to their security requirements.

### Maior Initiatives

At Yokogawa, we see the process from product development to system installation and operation as the system lifecycle. By supporting customers' security activities throughout that lifecycle, we work to reduce the risks to critical infrastructure that originate in cyberspace.

### Product development

- We have established a basic policy and standards for security measures. These are incorporated into our development process to eliminate vulnerabilities from products and enhance security.
- Yokogawa's control system product development department has obtained ISASecure SDLA (Security Development Lifecycle Assurance) certification from the ISCI, an international organization
- promoting security certification. This certification is given when the development process of control system products is found to meet the requirements for the secure development of products based on evaluations conducted by an independent organization. The review process determines that development processes comply with IEC 62443-4-1, an international standard governing product development security. Yokogawa is the first supplier of control system products in Japan to obtain this certification.
- To ensure security quality, our main products, CENTUM VP and ProSafe-RS, have obtained ISASecure CSA (Component Security Assurance) certification. ISASecure CSA certification is designed to comply with IEC 62443-4-1 and IEC 62443-4-2, international standards for the security of control devices.



ISASecure SDLA certificate

### System Installation

 Through security training for engineers, the research and study of security technology conducted mainly at the security laboratory, and support for the introduction of security measures to systems, we aim to realize a uniform implementation of security and secure progress for system integration.

### System Operation

• Through the operation of a security program, we aim to reduce cybersecurity risks in customer systems throughout their lifecycles, connect OT security risk management to business risk management, and realize optimal security systems so that customers can operate safely and securely in the wake of the era of IT/OT convergence and System of Systems (SoS). The program follows the Plan-Do-Check-Act cycle and offers six phases in total for continuous improvement and updating.

At Yokogawa, we provide extensive support, ranging from consulting services that derive the measures needed by each customer to implementation and operation through our OpreX™ Managed Service and OpreX™ IT/OT Security Operations Center (IT/ OT SOC).



Security laboratory



### PSIRT (Product Security Incident Response Team)

• Starting from October 2023, we have joined the international framework for vulnerabilities, Common Vulnerabilities and Exposures (CVE) program, as a CVE Numbering Authority (CNA). This allows us to assign CVE ID, an identifier for vulnerabilities used in the CVE program, ourselves. As a CNA, we extensively gather information about vulnerabilities related to our products, disseminate the information we obtain throughout the Yokogawa Group, investigate, and disclose relevant information regarding vulnerabilities and countermeasures to customers to support their security activities.



## **Privacy and Data Protection**

### Privacy and Data Protection Governance Structure

As compliance is of utmost importance to Yokogawa, a global Privacy and Data Protection management system is established for the purpose of ensuring compliance with Privacy and Data Protection laws and regulations. As part of this management system Yokogawa's Privacy and Data Protection Governance Section has been established, which is the organization within Yokogawa responsible for global Privacy and Data Protection compliance. The Privacy and Data Protection management system, includes several internal Privacy and Data Protection policies, which specify how personal information shall be processed by Yokogawa, to meet Yokogawa's Privacy and Data Protection standards and to comply with applicable Privacy and Data Protection laws and regulations. All Yokogawa employees must be familiar with and comply with Yokogawa's Privacy and Data Protection policies and receive Privacy and Data Protection training, which includes training on Yokogawa's Privacy and Data Protection policies.

### **Privacy and Data Protection Governance Structure**

Yokogawa has developed a global PDP\* structure for each individual company.



\*PDP: Privacy and Data Protection

### A number of principles included in Yokogawa's Privacy and Data Protection policies:

- Collection and Use: When Yokogawa collects personal information, a Privacy Notice to inform the individual(s) from whom Yokogawa collects personal information must be provided with the content set forth by and in line with applicable Privacy and Data Protection laws and regulations. Personal information shall only be used for the specific purposes notified to the individual(s) through the relevant Privacy Notice, unless otherwise set forth in the applicable law.
- Accuracy: Personal information shall be accurate and kept up to date. Inaccurate or out-of-date personal information must be corrected/destroyed.
- Retention Period: Personal information shall not be retained any longer than is necessary for the purpose for which the personal information was acquired and/or as necessary to comply with legal retention requirements.
- Transfer to third parties: Personal information may only be transferred to a third party if the transfer is allowed under the applicable Privacy Notice; appropriate security measures have been taken to protect personal information, and other requirements under applicable Privacy and Data Protection laws and regulations have been met.

- Data Processor: When outsourcing operations processing personal information to subcontractors, before engaging with a subcontractor, Yokogawa conducts due diligence by using Yokogawa's supplier privacy compliance questionnaire form to validate if they ensure the same or higher level of Privacy and Data Protection standards ensured by Yokogawa and Yokogawa concludes data processing agreements if necessary.
- Privacy by Design: To ensure that Yokogawa considers Privacy and Data Protection in the development, design and implementation of any new process, application or product/service which involves the processing of personal information, Yokogawa's Privacy and Data Protection policies contain strong Privacy by Design requirements, such as conducting privacy impact assessments, and where required data protection impacts assessments.
- Incidents: To respond promptly to a data breach and comply with global legal requirements, Yokogawa's Privacy and Data Protection Governance Section and the global ISMS team have created a global Incident Procedure for all employees to follow.
- Security: In order to ensure proper security of personal information, Yokogawa maintains robust Information Security Management standards. Under these standards Yokogawa strives to prevent unauthorized access to, loss, destruction, falsification or leakage of personal information. When outsourcing operations which include processing of personal information to subcontractors, Yokogawa takes appropriate security measures, such as requiring the subcontractors to maintain a high level of information security. Information security incidents related to personal information, however trivial, are managed in line with Yokogawa's Privacy and Data Protection policies.
- Response to Individual Rights on personal information: If Yokogawa receives a request from an individual concerning the individual's personal information, such as informing about the collection and use of their personal information, having inaccuracies regarding their personal information corrected, withdrawing their consent for the collection and use of their personal information, and/or having their personal information deleted, Yokogawa will respond to and handle the request in line with the applicable statutory requirements and in line with Yokogawa's Privacy and Data Protection policies.
- Audit: To monitor Yokogawa's Privacy and Data Protection compliance, the Privacy and Data Protection Governance Section conducts Privacy and Data Protection audits at company level in line with Yokogawa's Privacy and Data Protection policies. Many Yokogawa entities are ISO 27001 certified.



Yokogawa Group Privacy Statement are on our website.

### **Key activities 2023**

Yokogawa is further developing and updating its global Privacy and Data Protection Framework. This is a robust global framework which consists of new global policies, procedures, templates and guidance documents. We also conducted new global Privacy and Data Protection in person training for key employees in all our regions. Yokogawa has an internal website for Privacy and Data Protection where all our policies, procedures, templates and guidance documents are published. In addition, we publish updates when there are relevant changes and updates in relevant jurisdictions.



PDP website





## **Quality Assurance**

### The Basic Quality Policy

- Quality management is carried out in order to implement customer focus based on "Quality First," which is the spirit of foundation, and "Healthy and Profitable Management" through improvements in management quality.
- Products that meet statutory and regulatory requirements as well as customer requirements are
- Appropriate quality management systems conforming to the International Standard ISO 9001 requirements are established and implemented. In addition, the effectiveness of those systems is continually improved.
- Customer requirements are fulfilled and customer satisfaction is increased through the results of quality activities in all organizations and personnel. For this purpose, each employee must feel that the quality of his or her work has a direct bearing on product quality, and that the company believes in "Quality First."
- The head of each organization is responsible for the quality of the relevant businesses. The responsibilities include ensuring that adequate resources are made available.

### Customer Satisfaction and Quality

Yokogawa provides quality products and solutions that satisfy our customers. This is built upon the Quality First founding spirit that we have preserved for over 100 years. Our quality management consists of three basic elements: Quality Assurance (QA), Quality Improvement (QI), and Quality mind (the quality-first mindset) (Qm).

### Quality Assurance (QA)

Continually seeking to provide better products to customers based on the philosophy of quality being the highest priority

### Quality Improvement (QI)

Establishing a system to provide quality products and services

### Quality mind (the quality-first mindset) (Qm)

Each and every employee having the quality-first mindset that is the Yokogawa Group's founding spirit

Three elements of quality management **Customer satisfaction** Quality in every aspect begins with the mind

We believe that we can satisfy our customers' expectations and build long-lasting relationships of trust only when all of these elements are engaged. Yokogawa believes the quality-first mindset is particularly important for maintaining high levels of quality. All Yokogawa Group employees are aware of the importance of having the quality-first mindset, and quality is built into each operation based on group-wide rules and approaches.

### Quality Assurance Activities

Since its founding, Yokogawa has built quality management systems into each process from development, planning, design, and manufacturing to sales and service, in order to deliver products and solutions that satisfy its customers. Yokogawa first obtained ISO 9001 certification in 1992, and its major Group companies in and outside Japan have also obtained the certification. Specialists deal with the issues and problems with products that are encountered by customers. Yokogawa has a service system featuring its Global Response Center that continually watches over customer equipment globally to ensure the equipment's safety. Yokogawa also ensures the traceability of measurement instruments as part of its quality assurance system. Yokogawa is an enterprise registered with Japan Calibration Service System (JCSS) for electricity, pressure, flowrate, and time.

### Yokogawa QHSE\* Month

In 1960 in Japan, November was set as Quality Month by the Union of Japanese Scientists and Engineers, the Japanese Standards Association, the Japan Productivity Center, and the Japan Management Association. Yokogawa has continuously engaged in related activities during Quality Month.

Starting in 2018, we engage in an array of activities within the Group in November every year, having added occupational health and safety and environmental conservation, which are the foundation of management, to quality and renamed the month Yokogawa OHSE Month.



To instill the importance of quality, occupational safety and health, and environmental conservation in the minds of all employees, we have put up QHSE Month posters designed by an employee of a Group company. In addition to the quality-first mindset, we convey the thoughts of senior management regarding occupational safety and health, and environmental conservation to the employees of the Group in a QHSE Month message.

\* QHSE: Quality, Health, Safety, and Environment



### Yokogawa QA Booklet

To maintain and improve quality, Yokogawa has prepared a QA Booklet that explains the attitude that is necessary during work every day in easyto-understand terms. The booklet has been translated into five languages to facilitate implementation across the Group. Workers carry it at all times to ensure they maintain a quality-first mindset.



OA Booklet for manufacturing workers



### QHSE Maturity Assessment

In order to identify issues about the establishment and operation of quality, occupational health and safety, and environmental management system in the Yokogawa Group, and to promote continuous improvement, we have set our own numerical criteria for the maturity level of QHSE management system and have assessed these maturity levels for our major group companies in domestic and overseas since 2018.

And from 2022, we continue the assessment by adding perspectives such as strengthening of the governance in each Group company to our criteria.

Every year, we set our Group target of improving the maturity score by 5% compared to the previous fiscal year, and each Group company achieves the target by improving the maturity level through the promotion of improvement measures suggested in the assessment and their voluntary activities.



Information



# Information

- **74** AG2023 Target Review (Social Impact Indicators)
- **75** AG2023 Target Review (Business Activity Indicators)
- **76** Sustainability Data
- Third-Party Verification
- **78** Company Profile / Editorial Policy







# **AG2023 Target Review (Social Impact Indicators)**

The Social Impact Indicators are long-term indicators for measuring the degree of social contribution. Based on these indicators, we will expand our social and environmental contributions in the six areas to achieve the "Three Goals" and SDGs. In fiscal year 2023, we overall progressed steadily toward the achievement of the targets for fiscal year 2030 (fiscal year 2040).

Six contribution areas	Indicator	FY2030 (FY2040) target	FY2023 result	Progress
	CO <sub>2</sub> emissions control amount through customers (accum. from FY2018)	1 billion t-CO <sub>2</sub> (50% or more from renewable energy and new technologies)	410 million t-CO <sub>2</sub> (including 300 million t-CO <sub>2</sub> from renewable energy)	Mainly contributions to wind power generation increased.
Achieving carbon neutrality	GHG emissions (Scope1, 2) (base year: FY2019)	50% reduction by FY2030 100% reduction by FY2040	27.2% reduction	Procurement of renewable energy power increased.
7 ===== 13 ==	GHG emissions (Scope3)* (base year: FY2019) * Emissions from purchased goods and services (Category1) and emissions from use of sold products (Category11)	30% reduction	7.8% increase	In "purchased goods & services (Category 1)," emissions increased due to exchange rate fluctuations and rising procurement costs.
Improving efficiency in society & industry    The province of	Economic value created by improving customer productivity efficiency	2 trillion yen	218.3 billion yen	We are expanding the production and energy efficiency businesses.
Optimizing plant lifecycle & protecting environ-ment	protecting environ-ment  Yokogawa has contributed to sustainable		6,494 plants	We are contributing to sustainable operations with lifecycle support.
Improving health & safety	Total number of people whose health & safety have been enhanced through solutions provided by Yokogawa's customers	100 million people	61.48 million people	We are expanding the water environment solution business overseas.
Creating a resource-recycling ecosystem	Status of the new businesses launched that contribute to the resource recycling system	Establishment of two or more new resource recycling system business	We are developing resource r	ecycling systems in cooperation with partner companies.
	Engagement to enhance employee wellbeing	At a level comparable to other leading companies	79%	We are striving to improve the scores by taking measures based on the survey results.
Creating workplaces where people can fulfill their potential	Achievements in human resource development and capacity development for transformation	Advancing employee's future skill set	We are developing human resourd	sources leading to business growth. For example, we are ces.
5 == 0	Achievement level of diversity, equity, and	Proportion of women in managerial positions: 20%	14.5%	We are striving to increase the rate, considering local conditions.
	inclusion	Enhanced diversity at senior decision- making levels	We are considering defining o	liversity needed for business growth and setting targets.

■: Energy & Sustainability ■: Materials ■: Life ◆: Measuring Instrument ◎: Foundation for Business



**Result 2023** 

# **AG2023 Target Review (Business Activity Indicators)**

Through the PDCA cycle of our Business Activity Indicators, we have accelerated the growth of businesses that contribute to society (focus areas) under AG2023. Notably, sales of measurement instruments to renewable energy customers, as well as orders for specialty and fine chemical industry, significantly increased, exceeding our targets sub-stantially. We also achieved a substantial reduction in GHG emissions (Scope 1, 2), far surpassing our targets. On the other hand, the increase in orders for wireless asset health monitoring sensor units, the growth in sales in drug discovery development support products, and the reduction of GHG emissions (Scope 3) fell significantly short of targets, posing challenges. Based on these results, we will further accelerate contribution and growth under GS2028.

Six contribution areas	Focus area	Business		Indicator	FY2023 target	FY2023 result
	Supporting power generation by renewable energy	•	(;	CO <sub>2</sub> emissions control amount through customers accum. from FY2018)	500 million t-CO <sub>2</sub>	410 million t-CO <sub>2</sub>
Achieving carbon	Supporting distribution, storage, and utilization of	^	е	Sales growth rate of measurement instruments to renewable energy customers (base year: FY2020)	2.2 times	3.2 times
neutrality	renewable energy	• • •	t	Growth rate of number of units shipped of battery electrode chickness gauges (base year: FY2020)	1.7 times	1.0 times
	(within Yokogawa) GHG reduction at Yokogawa sites		© (	GHG emissions (Scope1,2) (base year: FY2019)	10% reduction	27.2% reduction
	and in supply chain			GHG emissions (Scope 3*) (base year: FY2019)	10% reduction	7.8% increase
	Smart manufacturing, consultation, ERP, MES, EMS	• • •	b	Order intake growth rate of production/energy efficiency ousiness (base year: FY2020)	1.3 times	1.3 times
Improving efficiency in society & industry	Value chain optimization for pharmaceutical and food & beverage customers (ERP, MES, LIMS, EQMS)	•		Order intake growth rate of pharmaceutical and food value chain optimization business (base year: FY2020)	1.3 times	1.3 times
society & illuusti y	(within Yokogawa) Operational optimization		O (	Reduction of business operation hours by auto-mation base year: FY2018)	300,000 hours reduction	424,948 hours reduction
				Ratio of digitized internal business processes	63%	70%
Optimizing plant lifecycle & protecting				Number of lifecycle support contracted plants	6,000 plants	6,494 plants
	Supporting long-term optimal operation of the plant		S	Order growth rate of number of wireless asset health monitoring sensor units (base year: FY2020)	3.2 times	1.2 times
			N	Number of equipment maintenance management system contract licenses	8,500 licenses	8,040 licenses
environ-ment	Supporting reduction of environmental footprint of the plant		C	Order intake growth rate of process analyzer (base year: FY2020)	1.3 times	1.2 times
	(within Yokogawa) Reduction of Yokogawa's environmental footprint (water and biodiversity)			Nater withdrawal amount at Yokogawa sites (base year: FY2019)	4% reduction	1% reduction
	Supporting safety and security of plant and workers			Number of safety instrumented systems provided	157 systems	175 systems
	Supporting safety and security of plant and workers			Number of plant operator training systems pro-vided	30 systems	34 systems
Improving health &	Life science business		p	Sales growth rate of drug discovery development support products (base year: FY2020)	2.5 times	1.4 times
safety	Supporting lifeline, water and sewage businesses		N ii	Number of solutions provided for water environment mprovement (excluding Japan)	90 solutions	91 solutions
	(within Yokogawa) Occupational health and safety of workers at Yokogawa, respect for human rights		© I:	SO 45001 certification acquisition	Principal locations certified (12 companies)	Principal locations certif (10 companies)
Creating a resource- recycling ecosystem	Contributing to specialty chemical and biochemical industries, supporting efficiency improvement of the recycling businesses	•	(	Order intake growth rate for specialty & fine chemical industry base year: FY2020)	1.6 times	3.5 times
	(within Yokogawa) Employee well-being & engagement		◎ E	Engagement survey score	81%	79%
Creating workplaces where people can fulfill	(within Yokogawa) People capability development for change			Fraining hour per person	40 hours per year per person	37.4 hours
their potential	(within Yokogawa) Promotion of diversity, equity &		_ F	Proportion of women in managerial positions	12.5%	14.5%
	inclusion			Employment rate of disabled persons (Japan)	2.5%	2.58%

<sup>\*</sup> Emissions from purchased goods and services (Category1) and emissions from use of sold products (Category11)



# **Sustainability Data**

### Social data

Item		2019	2020	2021	2022	2023
Number of employees (persons)	Yokogawa Group	18,107	17,715	17,258	17,084	17,365
Number of employees (persons)	Yokogawa Electric Co.	2,496	2,536	2,503	2,342	2,269
Women managers ratio (%)	Yokogawa Group	10.2	11.7	12.6	13.3	14.5
wollieli illallagers ratio (%)	Yokogawa Electric Co.	6.3	8.5	8.6	8.7	9.5
Women employee ratio (%)	Yokogawa Group	21.7	21.9	22.5	23.1	23.8
Wolfieli elliployee ratio (70)	Yokogawa Electric Co.	16.5	17.4	18.1	18.8	19.6
Disability employment rate (%)	Le leve	2.27	2.40	2.46	2.52	2.58
Disability employment rate (70)	In Japan	(2020/6)	(2021/6)	(2022/6)	(2023/6)	(2024/6)
Collective agreement coverage (%)	In Japan	73.1	73.7	72.7	77.7	76.8

### **Environmental data**

Item		2019	2020	2021	2022	2023
	In Japan	632,217	623,618	641,173	567,187	453,610
	Outside Japan	831,180	758,685	745,515	750,264	646,038
Energy consumption (GJ)	Total	1,463,397	1,382,303	1,386,688	1,317,451	1,099,648
	Intensity per sales (GJ/100 million yen)	362	369	356	289	204
Renewable energy (MWh)		112	175	2,594	10,730	26,362
	In Japan	30,745	29,850	28,331	25,127	19,732
	Outside Japan	48,025	42,966	42,155	41,958	37,643
Greenhouse gas (GHG) emissions	Total	78,770	72,816	70,486	67,085	57,375
(t-CO <sub>2</sub> e)	Intensity per sales (t-CO <sub>2</sub> e/100 million yen)	19.48	19.46	18.08	14.70	10.62
	Scope 1	14,000	11,727	12,015	15,390	11,966
	Scope 2	64,770	61,089	58,471	51,695	45,409

Item	Classificat	ion	Category	2023
		1	Purchased goods & service	274,575
		2	Capital goods	26,241
		3	Fuel- and energy-related activities not included in Scope 1 or 2	11,164
	Upstream	4	Transportation & distribution	15,711
	орѕпеатт	5	Waste generated in operations	1,253
Supply chain GHG emissions		6	Business travel	22,154
		7	Employee commuting	5,090
		8	Leased assets	-
(Scope 3) (t-CO <sub>2</sub> e)		9	Transportation & distribution	_
A dash (—) indicates "not applicable."		10	Processing of sold products	_
		11	Use of sold products	287,131
	Downstream	12	End-of-life treatment of sold products	900
		13	Leased assets	_
		14	Franchises	_
		15	Investments	_
	Total			644,219

Item			2019	2020	2021	2022	2023
Total reportable lost time incidents frequency rate Employees		0.34	0.11	0.41	0.34	0.34	
	(Number of accidents with lost days / Total actual working hours ×1,000,000)		0.28	0.00	0.23	0.32	0.20
Total reportable incidents frequency rate ((Number of accidents with lost days + Employees, temporary and Number of accidents without lost days) / contract employees Total actual working hours ×1,000,000)		0.64	0.59	0.69	0.80	0.82	
Fatal Accidents		Employees	0	0	0	0	0
Fatal Accidents		Temporary and contract employees	0	0	0	0	0
		Cash contributions	184.4	229.7	199.5	177.8	263.3
Donations and	Activities	Employee participation	1.0	0.6	0.7	0.5	3.9
community investments		In-kind giving	45.9	4.1	12.7	3.5	4.2
(million yen)		Management overheads	18.0	18.0	18.0	18.0	18.0
(iiiitiioii yeii)		Total	249.3	252.4	230.9	199.8	289.4

Item		2019	2020	2021	2022	2023
Technical Control of the Control of	In Japan	246,539	240,379	187,040	203,373	206,837
	Outside Japan	266,087	248,092	237,927	298,307	302,218
Water withdrawals (m³)	Total	512,626	488,471	424,967	501,680	509,055
	Intensity per sales (m³/100 million yen)	127	130	109	110	94
	In Japan	246,248	235,432	184,289	197,012	202,139
Water discharges (m³)	Outside Japan	228,154	227,369	218,831	242,676	222,643
	Total	474,402	462,801	403,120	439,688	424,782
	In Japan	2,414	1,977	2,530	2,203	2,176
	Outside Japan	2,499	2,406	2,162	2,310	2,700
Waste generated (t)	Total	4,913	4,383	4,692	4,513	4,876
	Intensity per sales (t/100 million yen)	1.22	1.17	1.20	0.99	0.90
	Recycled	3,333	2,851	3,142	2,877	3,164
Non-leasured accounts (b)	Incinerated	393	481	434	393	404
Non-hazardous waste (t)	Landfilled	613	524	333	489	597
	Total	4,339	3,856	3,909	3,759	4,165
	Recycled	_		708	546	425
Hamandana masta (t)	Incinerated	_	_	75	207	279
Hazardous waste (t)	Landfilled	_	_	0	1	7
	Total	574	527	783	754	711

# **Third-Party Verification**

To assure the reliability of sustainability information, Yokogawa has received an assurance for social and environmental data by a third-party organization (LRQA Limited).



### **LRQA Independent Assurance Statement**

Relating to Yokogawa Electric Corporation's Environmental and Social Data for the fiscal year 2023

This Assurance Statement has been prepared for Yokogawa Electric Corporation in accordance with our contract.

LRQA Limited ("LRQA") was commissioned by Yokogawa Electric Corporation ("the Company") to provide independent assurance on its environmental and social data within its Sustainability Report 2024("the report") for the fiscal year 2023(from 1 April 2023 to 31 March 2024) against the assurance criteria below to a limited level of assurance and the materiality of the professional judgement of the verifier using ISAE 3000 (Revised) and ISO 14064-3:2019 for greenhouse gas ("GHG") emissions.

Our assurance engagement covered the Company's operations and activities in Japan and overseas and specifically the following requirements:

- · Verifying conformance with the Company's reporting methodologies
- . Evaluating the accuracy and reliability of data for only the selected indicators listed below: Environmental indicators:
- Energy usage (GJ) <sup>1</sup>
- o Renewable energy usage(MWh)
- GHG emissions <sup>2 3</sup> (Scope 1, Scope 2 [Market-based] and Scope 3 [Category 1 15]) (tCO<sub>2e</sub>)
- Water withdrawal (m³) and Water discharge volume (m³)
- o Total waste generated (tonnes) and Total waste landfilled (tonnes)
- o Emission amount of VOC 4 (tonnes)

### Social indicators:

- o Total reportable incidents frequency rate
- o Total reportable lost time incidents frequency rate
- Number of fatal accidents
- o Women managers ratio to all managers (%)
- o Number of Tier-1 companies, other related with procurement and percentage of total expenditures

LRQA's responsibility is only to the Company. LRQA disclaims any liability or responsibility to others as explained in the end footnote. The Company's responsibility is for collecting, aggregating, analysing and presenting all the data and information within the report and for maintaining effective internal controls over the systems from which the report is derived. Ultimately, the report has been approved by, and remains the responsibility of the Company.

### LROA's Opinion

Based on LRQA's approach nothing has come to our attention that would cause us to believe that the Company has not, in all material respects:

- Met the requirements of the criteria listed above
- Disclosed accurate and reliable environmental and social data

The opinion expressed is formed on the basis of a limited level of assurance and at the materiality of the professional judgement of the verifier.

Page 1 of 2



LRQA's assurance engagements are carried out in accordance with ISAE 3000 (Revised) and ISO 14064-3:2019. The following tasks were undertaken as part of the evidence gathering process for this assurance engagement:

- . Auditing the Company's data management systems to confirm that there were no significant errors, omissions or misstatements in the report. We did this by reviewing the effectiveness of data handling procedures, instructions and systems, including those for internal verification.
- Interviewing with those key people responsible for compiling the data and drafting the report.
- Sampling datasets and traced activity data back to aggregated levels;
- Verifying the environmental and social data and records for the fiscal year 2023; and
- Visiting Kofu factory of Yokogawa Manufacturing Corporation to confirm the data collection processes, record management practices, and to physically check their facilities

The Company is expected to make its data aggregate calculation process automatic possibly can.

### LRQA's Standards, Competence and Independence

LRQA implements and maintains a comprehensive management system that meets accreditation requirements for ISO 14065 Greenhouse gases - Requirements for greenhouse gas validation and verification bodies for use in accreditation or other forms of recognition and ISO/IEC 17021-1 Conformity assessment - Requirements for bodies providing audit and certification of management systems - Part1: Requirements that are at least as demanding as the requirements of the International Standard on Quality Control 1 and comply with the Code of Ethics for Professional Accountants issued by the International Ethics Standards Board for Accountants.

LRQA ensures the selection of appropriately qualified individuals based on their qualifications, training and experience. The outcome of all verification and certification assessments is then internally reviewed by senior management to ensure that the approach applied is rigorous and transparent.

LROA is the Company's certification body for ISO 9001 and ISO 45001. We also provide the Company with a range of training services related to management systems. The verification and certification assessments, together with the training, are the only work undertaken by LRQA for the Company and as such does not compromise our independence or impartiality

Dated: 3 June 2024

Takahiro Iio

LROA Lead Verifier

On behalf of LRQA Limited

10th Floor, Queen's Tower A, 2-3-1 Minatomirai, Nishi-ku, Yokohama, JAPAN

LROA reference: YKA4005469

Page 2 of 2

<sup>&</sup>lt;sup>2</sup> Indicates the primary energy equivalent under the Energy Conservation Law

<sup>3</sup> LRQA also reviewed the Company's 2023 fiscal year against its 2022 to confirm the year-on-year change in Scope 1 and 2 GHG emissions

<sup>(</sup>Production sites of YOKOGAWA group) toluene and xylene; (Production sites in Japan) 20 substances defined by 4 electrical and electronic organization <sup>5</sup> The number of occupational accidents with lost days and without lost days in the boundary divided by total working hours (in the unit of million hours)

<sup>6</sup> The number of occupational accidents with lost days in the boundary divided by total working hours (in the unit of million hours)

The extent of evidence-autherina for a limited assurance engagement is less than for a reasonable assurance engagement. Limited assurance engagements focus or aggregated data rather than physically checking source data at sites. Consequently, the level of assurance obtained in a limited assurance engagement is lower than the



# **Company Profile**

Yokogawa Electric Corporation Corporate Name:

▶ Director, President & **CEO**, Representative **Executive Officer:** 

Hitoshi Nara

2-9-32 Nakacho, Musashino-shi, Tokyo ► Headquarters

180-8750, Japan

September 1, 1915 ► Founded:

► Incorporated: December 1, 1920

► Paid-in Capital: 43,401 million yen

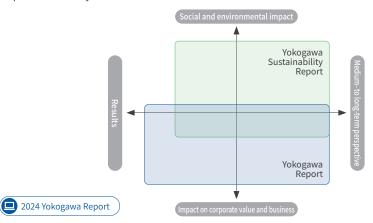
17,365 (Yokogawa Group) Number of 2,269 (Yokogawa Electric Co.) **Employees:** 

► Subsidiaries and 113 outside Japan **Affiliates:** 13 in Japan

(as of March 31, 2024)

### Information Disclosure Framework

Yokogawa comprehensively discloses its value creation story in the Yokogawa Report, which provides a summary based on medium to long term impact with regard to corporate value and business models, and in the Yokogawa Sustainability Report, which summarizes the Company's impact on society and environment.



### **Editorial Policy**

This report discloses information about the sustainability of the Yokogawa Group. This information is based on the GRI Standards, the global guidelines for the disclosure of sustainability information, and includes the disclosure of Yokogawa's priority issues in view of the opinions of its stakeholders. Further, Yokogawa has obtained external assurance to increase the reliability of the information.

This fiscal year, in presenting Yokogawa's sustainability contribution policies, strategies, and progress aligned with the new medium-term business plan "Growth for Sustainability 2028 (GS2028)," we reviewed Yokogawa's past sustainability activities. To promote both the expansion of sustainability contributions and our own growth, GS2028 focuses on a total of 14 themes as target areas for sustainability transition sales. This report summarizes and introduces the strategies, contributions, and goals of these themes in the "Stories of Growing Our Businesses and Contributing to Sustainability Transition" section.

Please see the Yokogawa Report (Integrated Report) for financial information and ESG information closely related to our business strategies. The GRI Standards Index is shown on our website.

### ▶ Period Covered by Report

FY2023 (April 1, 2023 to March 31, 2024)

This Report also includes some information on major activities in prior years and some of the latest information in FY2024.

Yokogawa Electric Corporation and its consolidated subsidiaries in Japan and overseas Where the scope is different, a note is added to the relevant data.

### **▶** Timing of Publication

November 2024 (published annually)

### ▶ Intended Readership

This Report is intended for a wide range of stakeholders, including customers, shareholders, investors, business partners, employees, local communities, NPOs, NGOs, and governments.

### **▶** Company Names

In this Report, "Yokogawa" and "Yokogawa Group" refer to Yokogawa Electric Corporation and its consolidated subsidiaries in Japan and overseas.

"Yokogawa Electric" and "Yokogawa Electric Co." refer to Yokogawa Electric Corporation.

### ► Reference Guidelines

- GRI Standards (Global Reporting Initiative)
- Environmental Reporting Guidelines 2018 (Ministry of the Environment, Japan)



### **Cover Concept**

The cover depicts a bright morning landscape, symbolizing the start of the first year of the new medium-term business plan (GS2028). The expansive green grassland reflects our commitment to business growth and contribution to society in harmony with nature. The blue sky symbolizes Yokogawa's clear vision for its goals and achievements.

# Yokogawa Electric Corporation Sustainability Promotion Department, Corporate Administration Headquarters 2-9-32 Nakacho, Musashino-shi, Tokyo 180-8750, Japan https://www.yokogawa.com/about/sustainability/