



Global Responsible Business

— Environment —

The Fujitsu Group has reassessed its social role in light of the escalating global commitment to achieving carbon neutrality. The Group has elected to fast-track its previous commitment to achieve “zero CO₂ emissions within the Group by FY2050”, instead bringing forward its Vision by 20 years to FY2030. The Group has set the additional target of reaching net-zero greenhouse gas emissions throughout the value chain by 2040.



Environment

Environment

Goal

WHAT FUJITSU ASPIRES TO BE

Fujitsu will fulfill its social responsibilities as a global corporate SX leader. In addition to achieving our carbon neutrality goals, we will solve various environmental challenges by providing innovative solutions through co-creation with our customers

GOALS FOR FY2025*

Fulfill our social responsibilities and help to resolve environmental challenges

- Reduce greenhouse gas (GHG) emissions from Fujitsu facilities and the supply chain with the aim of achieving Science Based Targets (SBT) net zero
- Avoid risks associated with our business activities and minimize our impact on the environment
- Help to resolve environmental challenges for customers and society through our business operations

GOALS FOR FY2022

Fulfill our social responsibilities and help to resolve environmental challenges

- Reduce greenhouse gas emissions at Fujitsu sites by 37.8% or more from the base year level (Reduce by 4.2% each year compared with FY2013)
- Avoid risks associated with our business activities and minimize our impact on the environment
- Help to resolve environmental challenges for customers and society through our business operations

* Specific targets are set in the Fujitsu Group Environmental Action Plan (Stage XI)

Introduction

Climate change is a global issue that impacts the sustainability of society, and it is closely related to water and resource recycling issues. Engaging in global environmental conservation is essential for achieving Our Purpose. The Fujitsu Group does its utmost to reduce environmental impact and minimize risks throughout the value chain, and we contribute to the realization of a sustainable society by solving environmental issues together with our customers.

Image of Achievement Fiscal Year for Environmental Vision, Targets, and Other Goals



To Reduce GHG Emissions in Accordance With 1.5°C Target

Updating Medium- and Long-term Goals

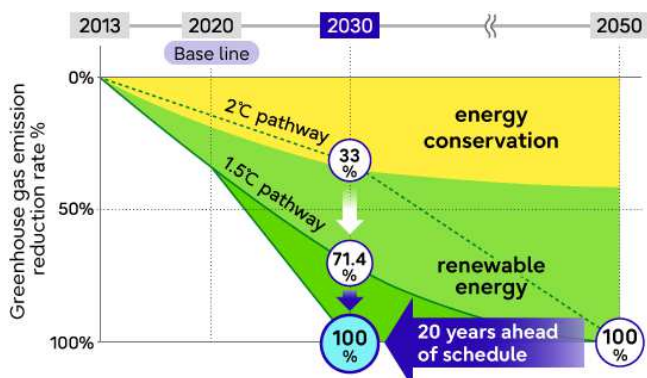
In May 2017, the Fujitsu Group formulated the Fujitsu Climate and Energy Vision as our environmental vision. In August 2017, we acquired SBT certification (2°C-aligned) for our reduction standard by 2030. As the movement toward carbon neutrality accelerated, we reconsidered the role that the Fujitsu Group must fulfill, and in April 2021 we raised our GHG emissions reduction target for 2030 from a 33% reduction compared to FY 2013 to a 71.4% reduction. This reduction target has been certified as 1.5°C-aligned by SBTi.

In order to accelerate decarbonization in the global community together with our supply chain, we have moved up the target deadline for 100% reduction by 20 years from the previous FY 2050 to FY 2030.

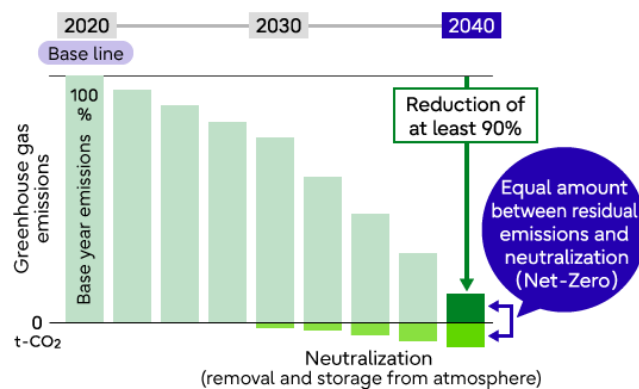
Furthermore, we have decided to aim for Net-Zero emissions in the entire value chain, including the supply chain (Scope 3), by FY 2040.

To ensure this target, we will follow the Fujitsu Group Environmental Action Plan (Stage XI) that we created as our activities through FY 2050.

(Our Net-Zero target for FY 2040 from the base year of FY 2020 received Net-Zero Certification from the SBT initiative in June 2023.)



Emission reduction of Fujitsu Group (Scope 1 and 2)



Emission reduction throughout the value chain (Scope 3)

Roadmap to Net-Zero

Initiatives for Achieving Goals

Since 2018, the Fujitsu Group has been a member of the international initiative RE100, which aims to popularize and expand renewable energy.

Previously, we focused on our sites in Europe and the United States. In April 2021, however, in anticipation of full-scale introduction in Japan, we switched all electricity used in the Kawasaki Plant, the largest in the Fujitsu Group to renewable energy as Fujitsu's flagship model.

This initiative affects approximately 5% of the Group's electricity consumption in Japan.

Furthermore, in April 2022, Fujitsu Australia signed the largest renewable energy power purchase agreement (PPA) in the Group, accounting for approximately 38% of its annual power consumption.



Exterior of Kawasaki Plant



Sapphire Wind Farm
Largest wind farm in New South Wales operated by CWP Renewables

- > [Fujitsu Group Sustainability Data Book 2021 \(p.5-3-3-12\) \(Examples of Initiatives in FY 2020: Introduction of Green Power\)](#)
- > [Fujitsu Group's Largest Facility to Source 100% of its Energy Needs from Renewables, Demonstrating Commitment to Achievement of RE100](#)
- > [Fujitsu Sources 100% of Energy Needs for Global HQ from Renewables](#)
- > [Fujitsu Australia signs the group's largest renewable energy power purchase agreement](#)

Avoiding Risks Associated with Business Activities and Minimizing Environmental Impact

Fujitsu Numazu Plant Received Prime Minister's Award for the 2023 Greening Promotion Movement

The Fujitsu Group promotes activities to reduce negative effects, and increase positive effects, on biodiversity to minimize environmental impact. For example, since its inauguration in 1976, Fujitsu Numazu Plant has been actively greening its facilities. It constantly maintains the natural environment in its premises, managing lawn, a biotope, a tea garden and other gardens in its premises, as well as green areas such as woodland that remains in its natural state, including ecosystems. In addition, a large green area is opened to local residents as a place for relaxation, where the Plant carries out many community exchanges holding seasonal events such as “tea picking festival” and “waling to experience nature.” Numazu Plant also is actively working to preserve biodiversity by pasturing goats for weeding, eliminating designated invasive alien species, raising “southern Japanese rice fish” (*Oryzias latipes*), an ancient Japanese species, in its biotope, and through other activities. In recognition of those continuous greening efforts, in April 2023, Numazu Plant received Prime Minister's Award for the 2023 Greening Promotion Movement, an award given by the Prime Minister to an individual or an organization that made outstanding achievements in the promotion of greening activities or the spread of greening awareness.



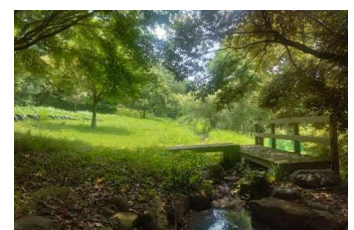
Numazu Plant (Aerial view)



Tea garden (tea picking festival)



Weeding by goat-pasturing



Biotope

Examples of How Our Business Helps Solve Environmental Issues for Customers and Society

A joint blockchain project for “J-Credit Easy Generation” has been launched to further develop environmental value exchange market

Fujitsu and IHI Corporation(*1) (IHI) have been working on a joint project since FY 2022 to realize carbon neutrality and to create an environmental value distribution platform that supports environmental value trading. Now, to simplify the environmental value creation process (collection, verification, and reporting of data such as CO₂ emissions) for the J-Credit(*2) issuance, they launched the “J-Credit Easy Generation”(*3) in June 2023.

As part of this initiative, the two companies applied for, and were selected as, collaborators engaged in a project for the “Outsourcing of Research and Development towards Digital Technology Utilization in FY 2023 J-Credit System” of the Japan’s Ministry of Environment. They will work on this project from June 2023 to March 2024.

The two companies plan to start providing the “J-Credit Easy Generation” as a module of the environmental value distribution platform in FY 2024.

Overview of Joint Project

Since FY 2022, Fujitsu and IHI have been carrying out a joint project to create an environmental value distribution platform, which converts CO₂ emissions reductions calculated using data collected at IHI’s IoT platform “ILIPS” (IHI group Lifecycle Partner System)*4 into tokens*5 that can be distributed on the environment value exchange market using Fujitsu’s “ConnectionChain”*6 a technology that securely interconnects different blockchains.

By adding “J-Credit Easy Generation” to the environmental value distribution platform, companies and organizations that are making environmental contributions, such as reducing CO₂ emissions (environmental value creators) will be able to easily convert their environmental value, such as CO₂ reductions, into J-Credits.

At the same time, by promoting the application of digital technology to J-Credit trading, Fujitsu aims to build a sustainable value chain model that enables buyers to smoothly trade the environmental value created by environmental value creators in the form of J-Credits.

Using “J-Credit Easy Generation” as a starting point, the two companies will contribute to the realization of carbon neutrality by expanding their businesses to tackle the digital verification of the diverse environmental values, including product carbon footprint.

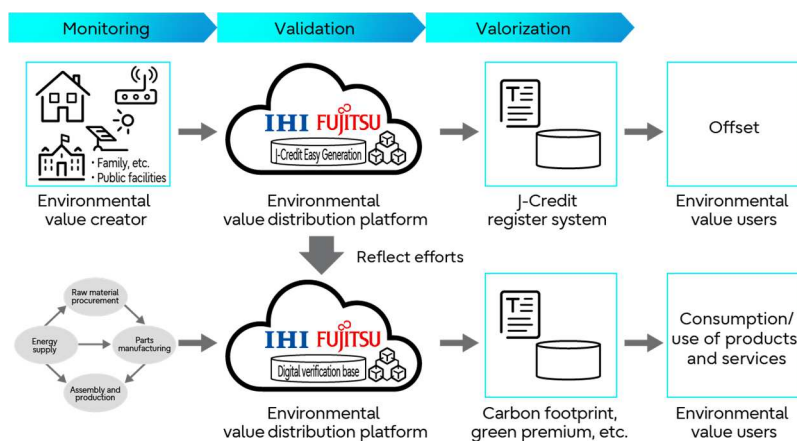


Figure 1 Digital verification of diverse environment values

Overview of the Demonstration Project of "J-Credit Easy Generation" for the Ministry of Environment's J-Credits (Public Offering Overview)

This project considers the simplification of the process from monitoring to issuing J-Credits through IoT and blockchain technology using the methodology of "Introduction of Photovoltaic Power Generation Facilities (EN-R-002)."

The demonstration will be conducted in the following three phases:

1. From June 2023 to August 2023: Planning the demonstration and sorting out the issues to be verified
2. From September 2023 to December 2023: Conducting the demonstration
3. From January 2024 to March 2024: Making final adjustments for actual operation

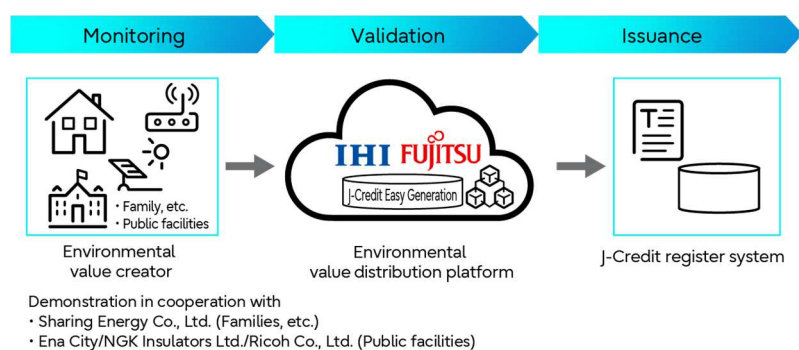


Figure 2 Demonstration of "J-Credit Easy Generation"

- *1 IHI Corporation: based in Koto City, Tokyo, presided by Hiroshi Ide, CEO.
- *2 J-Credit: A system in which the Japanese government certifies the amount of greenhouse gases reduced or absorbed as credits.
- *3 J-Credit Easy Generation: A system that simplifies the process of creating environmental value for J-Credits using IoT and blockchain technology.
- *4 ILIPS: A common platform for IHI Group products that accumulates data from equipment and facilities on cloud servers for use in lifecycle business to enhance IHI Group products and services.
- *5 Tokens: Digitized rights and assets issued independently by a company or organization through blockchain technology.
- *6 ConnectionChain: Blockchain technology that securely interconnects different blockchains and ensures transparency of transactions.

> [Fujitsu and IHI start joint project on new environmental value distribution platform using blockchain technology](#)

Fujitsu and Chugoku Electric Power T&D conduct joint trials to expand use of renewable energy and improve maintenance of power transmission facilities

To expand use of renewable energy, Fujitsu and Chugoku Electric Power Transmission & Distribution Company, Incorporated(*7) (Chugoku Electric Power T&D) aim to realize dynamic line rating (DLR)(*8) a promising next-generation power network technology and to utilize drones for improving the maintenance of power transmission facilities. To this end, they conducted joint trials for one year from September 2021 to verify the practical application of environmental data(*9), including wind conditions, obtained and converted through power transmission facilities of Chugoku Electric Power T&D.

In order to boost the use of renewable energy, power transmitters and distributors are aiming to develop next-generation power networks by strengthening power grid(*10), developing grid control technologies, and in other ways. Chugoku Electric Power T&D also actively take on this challenge.

Moreover, Chugoku Electric Power T&D utilizes drones for maintenance work, such as patrolling and inspecting its facilities, and locating any malfunctions. As drones flight is greatly affected by wind, however, further utilization of them requires real-time and accurate monitoring of environmental data (wind conditions) in the vicinity of power lines installed over a wide area.

Utilizing Fujitsu's proprietary data conversion technology, these joint trials converted optical ground wire (OPGW)(*11) vibration data from the OPGW of the power transmission lines through optical fiber sensing technology(*12) into estimated environmental data in the vicinity of the transmission, and then compared and verified that data with the actually measured data at the site. Consequently, it was confirmed that they were generally in agreement with each other.

This enables the efficient and accurate acquisition of environmental data (wind conditions) near the power transmission facilities installed over extensive areas, which can be more widely applied to patrols and inspections with DLR and drones. This will then help expand the use of renewable energy and further enhance the maintenance of power transmission facilities.

The two companies will promote the early development of an advanced power grid operation support system that can utilize environmental data (wind conditions) and temperature data of the power lines to manage power transmission capacity flexibly through DLR and to improve maintenance operations with drones. At the same time, they will further advance digital transformation (DX) to reform maintenance operations and solve social issues such as sustainable energy supply.

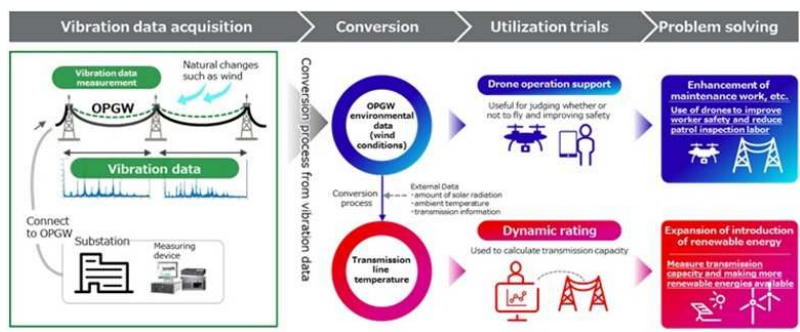


Figure 1: Overview of the field trials

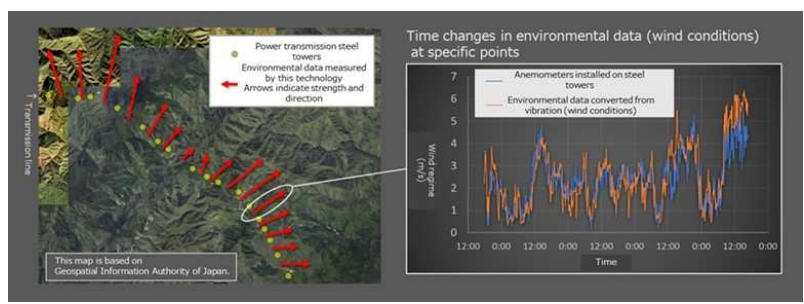


Figure 2 Screen image of prototype system supporting advanced operation of transmission network (in Japanese)

- *7 Chugoku Electric Power Transmission & Distribution Company, Incorporated: based in Hiroshima City, Hiroshima Prefecture, presided by Hiroyuki Hasegawa.
 - *8 Dynamic line rating: Technology to flexibly operate transmission capacity of electric transmission and transformation facilities.
 - *9 Environmental data: A data group of estimated environmental conditions (e.g., wind conditions) along the optical ground wire (OPGW) and its vicinity.
 - *10 Power grid: A series of electric power facilities and systems consisting of transmission, transformation and distribution of electricity from power stations to users.
 - *11 OPGW: Optical Ground Wire. Equipment that incorporates optical fiber cables in overhead ground wires to protect power transmission lines from lightning strikes.
 - *12 Optical fiber sensing technology: Technology that enables real-time measurement of how optical fiber cables vibrate by inputting specific laser pulse light into optical fiber cables for communication and measuring changes and components of light such as backscattered light. For the measurement, a dedicated measuring device and a computer for data calculation are used.
- > Fujitsu and Chugoku Electric Power T&D conduct joint trials to expand use of renewables and improve maintenance of power transmission facilities

Fujitsu began selling a service that provides up to 100% of the electricity consumed by Fujitsu Data Center users from renewable energy sources

Aiming to help customers accelerate their efforts to reduce greenhouse gas (GHG) emissions throughout their supply chains, Fujitsu began selling a service that provides environmental value(*13) to the users of Fujitsu Data Centers (DC) through the “Environmental Value Delivery Service”(*14) in FY 2022.

To achieve carbon neutrality, each company will need to reduce not only their own GHG emissions but also indirect GHG emissions from the services of other companies it uses.

On the other hand, it is revealed that more than 80% of companies are facing challenges in achieving carbon neutrality.

As a leading global environmental-friendly company, Fujitsu has set the goal of fulfilling its social responsibility and contributing to solving environmental issues. To contribute to this goal in its DC business as well, Fujitsu has begun offering “Environmental Value Delivery Service” from a new perspective.

Overview of Environmental Value Delivery Service

This service provides Fujitsu DC users in Tatebayashi, Yokohama and Akashi with up to 100% of the contracted electricity from renewable energy sources. As Fujitsu issues a certificate as proof of use of renewable energy for DC service, they can publicly demonstrate that they are helping reduce GHG emissions(*15).

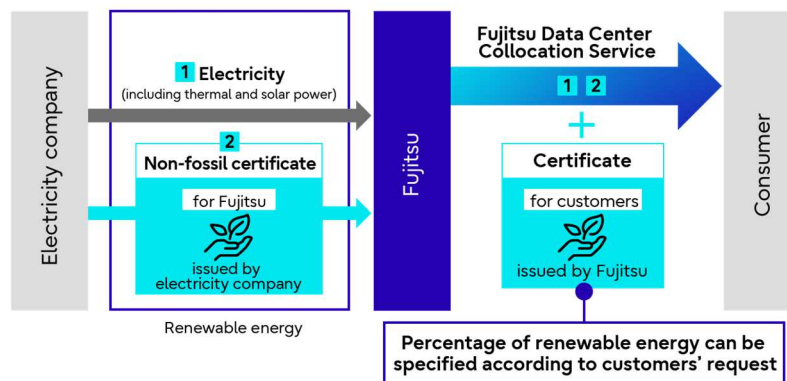
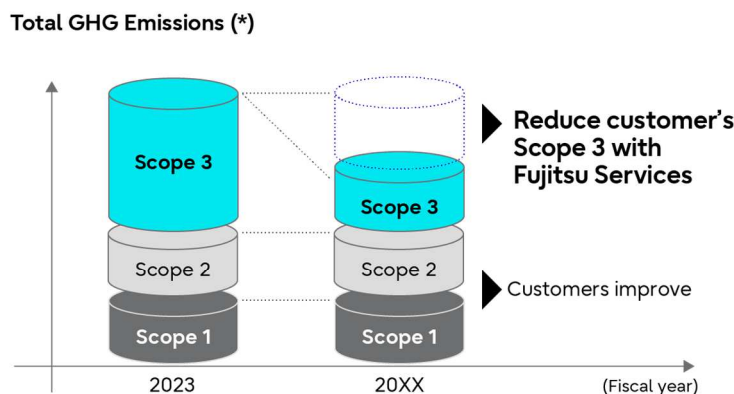


Figure 1 Overview of Environmental Value Delivery Service



*Abbreviation for greenhouse gases. CO₂ (carbon dioxide) is one of several GHGs and has the greatest impact on global warming.

Figure 2 What can be achieved through Environmental Value Delivery Service

*13 The energy generated in a non-GHG-emitting manner is recognized as non-GHG-emitting value in environmental activities.

*14 FUJITSU Hybrid IT Service, Collocation Service, Environmental Value Delivery Service.

*15 This aims to reduce customers' Scope 3.

> [Environmental Value Delivery Service \(Japanese text only\)](#)

Environmental Management

Environmental Management System

We are continuously working to improve our ISO14001 (*1) based environmental management systems and to promote Group-wide environmental management.

(*1) ISO14001 : Environmental Management Systems (EMS) standard determined by the International Organization for Standardization (ISO). Certification is granted to environmentally conscious organizations that develop systems for ongoing reductions in their environmental footprint.

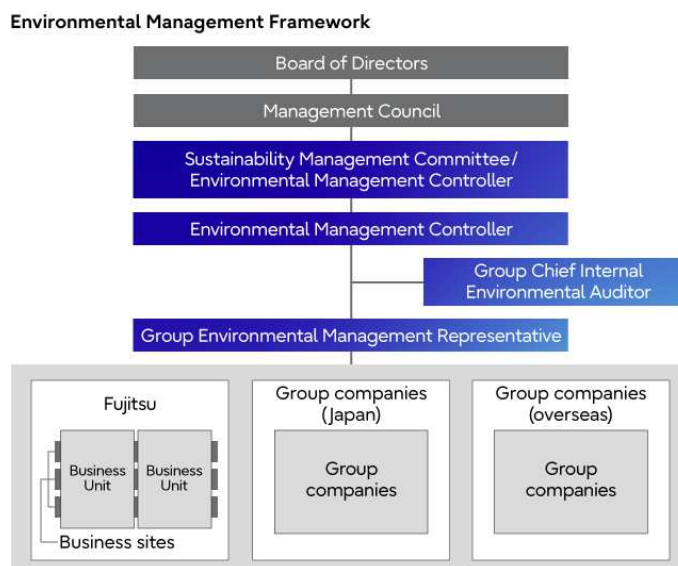
Fujitsu Group's Environmental Management Systems (EMS)

Fujitsu Group has constructed Environmental Management Systems (EMS) based on the ISO 14001 international standard and is promoting environmental improvement activities across the Group. After acquiring ISO 14001 certification for consolidated subsidiaries in Japan at the end of FY 2004, we expanded this effort to include overseas subsidiaries and acquired global integrated certification at the end of FY 2005. Subsequently, the overseas subsidiaries switched to individual certification.

Environmental Management Framework

In April 2020, Fujitsu Group set up the Sustainability Management Committee, which leads the charge for management which takes sustainability initiatives into account. The Sustainability Management Committee has established major sustainability issues which are common globally (Global Responsible Business: GRB) and is working to address them, and the environment is one of those to be addressed. In order to promote environmental activities, we consider medium- and long-term issues, formulate policies, share business risks and opportunities due to climate change, consider ways to respond, and report regularly to the Sustainability Management Committee in order to improve EMS and strengthen governance. Based on that, final approvals on environmental management at the Fujitsu Group are made at meetings of the Management Council.

In the promotion of environmental activities, we have organized environmental organizations in charge of issue-specifics, etc., composed of relevant parties that go beyond the framework of business groups and business units. Through the promotion structure shown in the figure below, we are moving swiftly to popularize initiatives for addressing environmental issues throughout the Group.



Constructing and Operating Environmental Management Systems

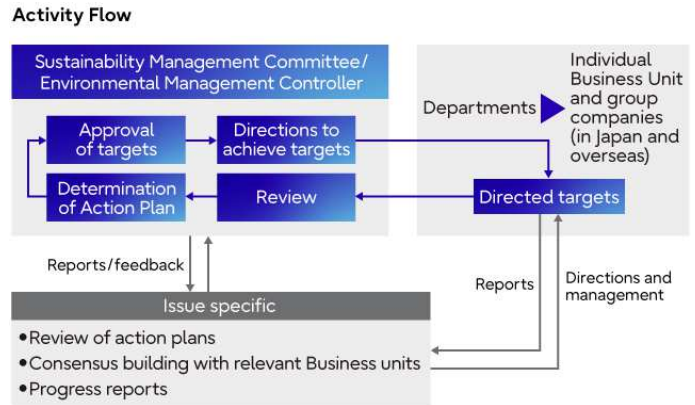
The Fujitsu Group has constructed EMS based on the ISO 14001 international standard and is promoting environmental improvement activities across the group. By constructing EMS worldwide, the Fujitsu Group further strengthened its Group governance. This also allows the Group to promote even more efficient and highly effective environmental activities, including understanding the state of activities, legal compliance, and emergency response.

As of March 2023, Fujitsu and 29 domestic Group Fujitsu companies had acquired ISO 14001 Group Integrated Certification. In the Group as a whole, 62 companies, including 30 companies with integrated certification, have acquired ISO 14001 certification.

Activity Flow

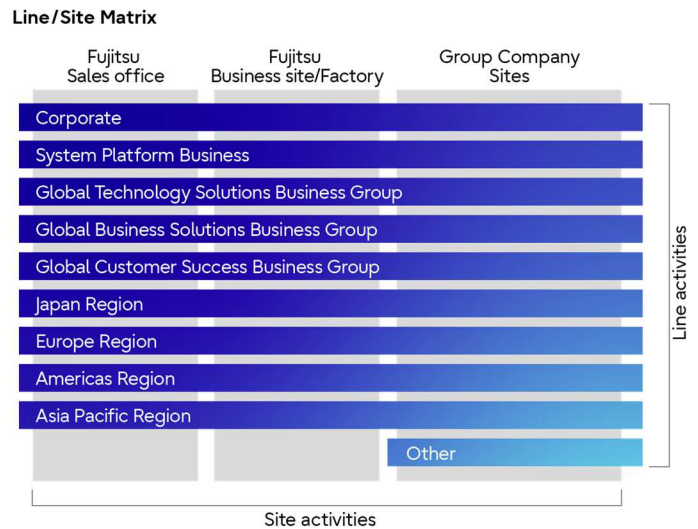
The Sustainability Management Committee deliberates on the status of environmental activities related to the entire Group, the achievement status of targets, and new activities, which are all regularly reported by the environmental activities promotion organization. For example, the committee determines the directions to be taken for reduction of energy consumption and CO₂ emissions, countermeasure for environmental risk, and other environmental medium-to-long term visions. The Sustainability Management Committee also conducts environmental management reviews and is exercising approval authority for the Fujitsu Group Environmental Action Plan.

Organizations in charge of issue-specific are sub-organizations set up under the Sustainability Management Committee, with the goal of providing dedicated responses to address specific tasks professionally. The tasks of the organizations are discussing targets and confirm the progress and promote to achieve for the Environmental Action Plan. After receiving progress reports from the organizations, the Environmental Management Controller approves the status of activities and suggestions of future focuses, etc., and instructs all organizations to implement the necessary initiatives.



Management Based on the Line/Site Matrix Structure

The Fujitsu Group carries out its environmental management within a matrix structure combining (1) "line activities" directly tied to the business operations of various Business Groups and companies (including development of eco-friendly products and the expansion of environmental contribution solutions) and (2) "site activities" to tackle common themes affecting each factory or business location (such as energy conservation and waste reduction). In this way we carry our environmental management according to the same framework as our management, while also reducing the environmental footprint generated by our business activities and the sale of our products and services.



> [Environmental Management Initiatives \(Case Studies\)](#)

Environmental Management Initiatives (Case Studies)

Operations Utilizing ICT

The Fujitsu Group actively utilizes its own ICT-driven environmental management tools to visualize and boost the efficiency of its environmental management.

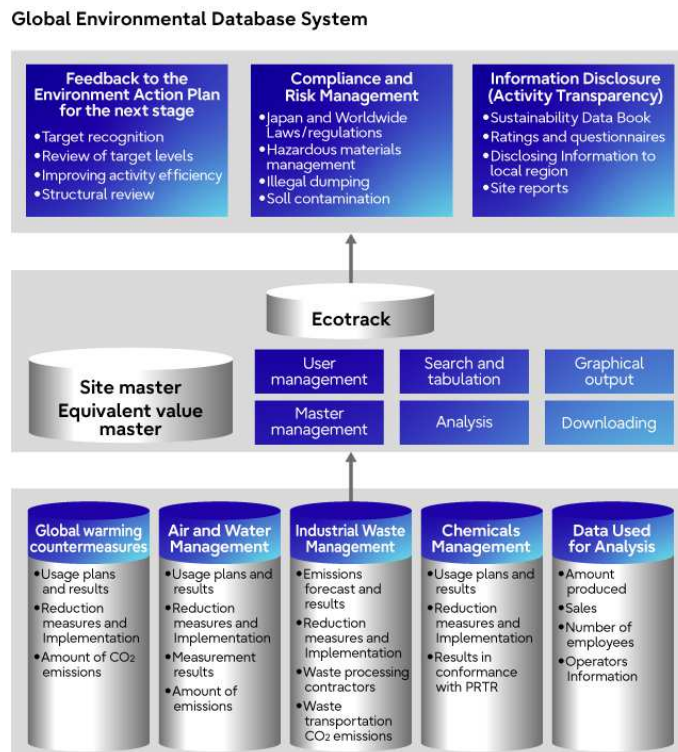
EMS Operations Using ICT

We are working to improve the efficiency and visibility of environmental management by making full use of the Global Environment Database System (Ecotrack), which can centrally manage aspects such as planning, performance, and policy information at business sites scattered throughout the world, and the ISO 14001 Green Management System (GMS), which centrally manages compliance and risk management status to support EMS operations.

Additionally, the communication infrastructure of all companies in the Fujitsu Group is used for EMS operations. For example, we try to conduct smart communication in our EMS operations, through activities such as using remote video conferencing systems to conduct EMS briefings.

Using the Global Environment Database System

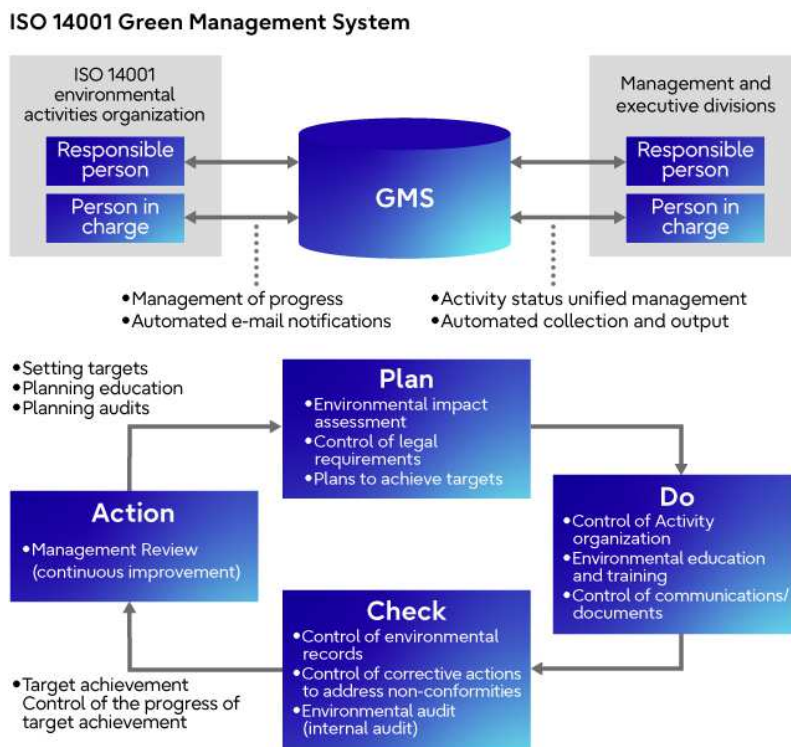
The Global Environment Database System (Ecotrack) is used to gather information about the environmental footprint (performance) of Fujitsu Group companies and business sites and centrally manage aspects such as planning, performance, and policy information.



Using the ISO 14001 Green Management System

The Fujitsu Group uses the ISO 14001 Green Management System (GMS) to exercise unified control over the operational status of the EMS concerning matters such as the status of improvements and the state of compliance with regard to items pointed out by internal audits, communications activities, direct and indirect effects identified in environmental impact assessments, and the setting of environmental targets.

Through the GMS, we can manage corrective measures and objectives with certainty, and it has been effective for continuously improving our activities and reducing risks.



Implementing Environmental Audits

Internal Audit Implementation and Results

The Fujitsu Group conducts internal audits, a requirement of ISO 14001. To ensure the objectivity and independence of internal audits, the Internal Control and Audit Office takes the lead, allocating internal auditors who belong to Fujitsu or Fujitsu Group companies and carries them out. For the internal audit in FY 2022, we continued to consider the promotion of Work-from-Home through work style reforms, and conducted on-site audits at manufacturing sites, data centers, and other sites with a high environmental impact.

In FY 2022, we carried out internal audits of 72 business sites in Japan, including the plants and offices of Fujitsu and its Group companies. When conducting audits, we closely examined the results of internal audits and external audits from FY 2021. The four points emphasized were (1) the status of implementation of the environmental management system, (2) the feasibility of achieving Environmental Action Plan Stage X, (3) the status of initiatives that regard the environment as a business opportunity, and (4) the status of the response to environmental risks associated with business conversion. There was one finding of a minor defect (non-conformity) and 11 observations (conformity). Of the observation, two were considered to be an effect of the resumption of on-site audits.

External Audits and Results

To maintain our ISO 14001 certification, we are carrying out external audits by a certifying body. In FY 2022, we were audited in Japan by the Japan Audit and Certification Organization for Environment and Quality (JACO). As a result, there were 36 opportunities for improvement and zero findings. We shared information about those opportunities within the Group, and are working to improve our response.

Table: Number of Findings by Audits

	FY 2020 (Japan)	FY 2021 (Japan)	FY 2022(Japan)
Number of findings by internal audits	13	7	12
Number of findings by external audits	0	0	0
Number of opportunities for improvement	52	33	36

Compliance with Environmental Laws

There were no major legal or regulatory violations or accidents with major impact on the environment in the Fujitsu Group during FY 2022.

Environmental Management

Response to Environmental Risks

Environmental Risk Management Structure

The Fujitsu Group built and operates a group-wide risk management system to identify, prevent, and mitigate a variety of potential risks, or prevent their recurrence, including issues related to climate change and environmental pollution. The Risk Management & Compliance Committee, which reports directly to the Board of Directors, has set up regional Risk Management & Compliance Committees, in addition to deploying Risk Management & Compliance Officers to each Fujitsu division and Group company in Japan and overseas, to build a structure where these organizations cooperate with each other to promote risk management and compliance throughout the Fujitsu Group, both in terms of preventing potential risks and responding to risks that have emerged. The Committee identifies, analyzes, and assesses key risks associated with the business activities of each Fujitsu division and Group company in Japan and overseas (focusing on 33 risks considered to be important to the Group), and formulates and reviews the countermeasures for these risks after confirming the status of countermeasures for avoiding, mitigating, transferring, or retaining them. The Committee makes regular reports to the Board of Directors about key risks that have been identified, analyzed and assessed, using methods such as the creation of visualized rankings and maps which take the degree of impact and likelihood of occurrence into account. In addition, we have put response processes into place in the event that risks become tangible, despite the implementation of various measures. Each division and Group company will immediately report to the Risk Management & Compliance Committee about any key risks that become tangible, such as natural disasters, accidents, product accidents or failures, system or service problems, compliance violations such as fraud, information security incidents, or environmental problems.

We also leverage the group's Environmental Management System (EMS), which is based on ISO14001, for minimizing risks to the environment through continuous improvements.

- [Risk Management](#)
- [Environmental Management System](#)

Efforts to Minimize Risks to the Environment

Dealing with Risks Related to Climate Change

There is a possibility of significant impacts on our business continuity from increases in the frequency and effects of natural disasters as a result of recent climate changes. For that reason, we have formulated a business continuity plan and are devoting effort to continually revising and improving the plan.

In addition to risks such as implementation of stricter regulations for greenhouse gas emissions and a carbon tax, there is demand from customers and society for contribution to carbon neutral. This creates a risk of increasing the energy cost incurred by the Fujitsu Group, as well as the cost required to comply with regulations related to measures for reducing greenhouse gas emissions. Additionally, if climate change countermeasures are insufficient, there is a risk of harm to our corporate reputation or a disadvantage at bidding.

In order to minimize these risks, we are conducting short-term, medium-term and long-term risk analysis/response within our company-wide risk management structure. As the trend toward carbon neutrality in the global community as a measure against climate change, we have obtained net-zero target certification from the Science Based Targets initiative (SBTi). We will further raise the 1.5°C level we acquired in fiscal 2021 and aim for net-zero by FY 2040.

In accordance with the recommendations issued in 2017 by the Task Force on Climate-Related Financial Disclosures (TCFD), the Fujitsu Group analyzes and discloses information related to risks accompanying climate change that may have an impact on business and financial strategies. Refer to the table below for the currently recognized potential major risks and responses.

Risks Associated with the Transition to a Low Carbon Economy, and Our Response to Them

<p>Policy/Legal Risks</p>	<ul style="list-style-type: none"> ● Risks: Increase in cost in order to respond to the strengthened laws and regulations on greenhouse gas emissions and energy use (such as a carbon tax), and diminished corporate value in the event of a violation. ○ Response: Complete compliance with laws and regulations through EMS. Continual reduction of the amount of GHG emissions through steady implementation of Science Based Targets and the Environmental Action Plan.
<p>Technology Risks</p>	<ul style="list-style-type: none"> ● Risk: Unrecovered investments and market share decline in the event that the company lags behind in a fierce competition in technological developments toward a carbon-free society (such as energy-saving performance and low-carbon services). ○ Response: Enhance development of energy-efficient products and energy-efficient enabling technologies, solutions, and services through steady implementation of Science Based Targets and our Environmental Action Plan.
<p>Market Risks</p>	<ul style="list-style-type: none"> ● Risk: Losing business opportunities if products, solutions, and services do not meet energy-saving performance needs. ○ Response: Enhance development of energy-efficient products and energy-efficient enabling technologies, solutions, and services through steady implementation of Science Based Targets and our Environmental Action Plans.
<p>Risks to Reputation</p>	<ul style="list-style-type: none"> ● Risk: Decline in corporate value and an increase in response costs associated with a negative assessment from stakeholders with regard to the response status of measures to counteract climate change (such as the percentage of renewable energy adoption). ○ Response: Enhance measures to counteract climate change and promote reduction of environmental footprint through steady achievement of the group's Science Based Targets and Environmental Action Plan.

Climate Change Related Risks in the Supply Chain, and Our Response to Them

<p>Upstream Supply Chain</p>	<ul style="list-style-type: none"> ● Risk: A temporary suspension of the suppliers' business activities due to the occurrence of severe natural disasters such as large-scale floods, sudden heavy downpours, and lightning strikes, which affects the procurement of materials. ○ Response: Conduct surveys of the business continuity capabilities of suppliers and implement measures to procure materials from multiple sources.
<p>Downstream Supply Chain</p>	<ul style="list-style-type: none"> ● Risk: Losing business opportunities due to the inability to obtain environmental labelling, which is a green procurement requirement of customers. ○ Response: Conduct trend surveys and risk assessments of the environmental labelling scheme. Develop and provide top-level energy-efficient products through steady implementation of Science Based Targets and our Environmental Action Plan.

RELATED INFORMATION

 [Fujitsu Group Responses to the CDP Climate Change Questionnaire 2022 \(Risk-Related Questions\)](#)
([PDF link](#))

Assessing and Monitoring of Potential Water Risks

In recent years, due to a tight demand-supply situation in many areas around the world because of water damage—such as flooding—and droughts that are caused by a variety of factors, including population growth and climate change, there is a growing concern that this issue may become a business risk. The Fujitsu Group conducts assessments of and monitors potential water risks for direct operations sites and supply chains.

Specifically, while using tools and databases provided by NGOs and national and local governments, we identify water stress conditions and natural disaster risks in regions where our business sites are located in accordance with RCP 4.5 (intermediate stabilization scenario) from among the emissions scenarios defined by the Intergovernmental Panel on Climate Change (IPCC). We then comprehensively assess the water risk at each site by analyzing how important water use is in the business activities of each operations base, and we confirm the level of compliance in a variety of activities such as the reduction of water intake, measures to reduce pollution in wastewater, business continuity management (BCM) systems, and others. For the supply chain, we also assess our suppliers' flood preparedness and other water risks based on the supply chain BCM surveys, field surveys conducted according to the Responsible Business Alliance's (RBA) code of conduct and the CDP Supply Chain Program. As a result, we have confirmed that there are no significant risks that could substantially affect our business activities.

RELATED INFORMATION

 [Fujitsu Group Responses to the CDP Water Security Questionnaire 2022 \(Risk-Related Questions\) \(PDF link\)](#)

Physical Climate Risk Adaptation

Fujitsu have risk assessment systems that include Physical Climate risk in place in Japan, Oceania, Europe and cross regional department Global Delivery.

As physical risk is different based on the location, adaption is tailored to that specific location and risk, for example.

Fujitsu Australia and New Zealand has identified the main physical climate risks to our business in the region, which include short term weather events e.g. extreme heat, flooding, storm events, as well as long-term climatic impacts e.g. drought.

Key measures undertaken in Australia and New Zealand to adapt to climate risks have included:

- Extreme heat events
 - Processes to ensure built-in redundancy of critical equipment and reliable operation of uninterruptable power sources in the event of grid-scale outages.
 - Ensuring equipment is designed to tolerate extreme temperatures.
 - Installing temporary cooling equipment (e.g. misting) to reduce ambient temperatures.
- Bushfire
 - Updating site-based procedures to assess business critical activities and evaluate which activities can be performed remotely in the short term.
 - Turning off external air intakes to offices and data centers to limit smoke ingress.
- Drought
 - Deployment and maintenance of rainwater storage tanks at some sites.
 - Use of recycled water where possible.
 - Installing real-time water loggers at all data centers to monitor consumption trends and help inform water usage efficiency projects.
- Other
 - Climate risk (e.g. extreme heat modelling) incorporated into assessment of siting of new data centers

Within Europe the climate risk is different to Oceania and a number of measures to adapt to climate change risk have been undertaken at a cost of over £1million in one London location showing the seriousness that we consider Climate impact and the commitment that we take protecting our continued service.

- Installing the infrastructure to enable the local water authority pumping equipment to use our data centers Uninterruptable Power Supply (UPS) in the event of a flood
- Dredging the local lagoon to help it act as a water sink

Other examples of adaption based on Physical climate risk in specific locations

- Philippines, the Business Continuity Planning includes natural disaster events such a typhoons and monsoons and other extreme weather events
- Malaysia – Natural Disaster Prevention guidelines provides emergency contact details and advice for employees with their safety prevalent

Another example off adaption is the modernisation and cocreation of the Flood Warning System (working with the UK Environment Agency). A system that can issue flood warnings to citizens within 20 minutes. The flood warning service hosts more than 1.5 million registered properties, 2.9 million telephone numbers, 180,000 email addresses and 1.5 million registrations for mobile text alerts. Since its launch the flood warning system has sent more than 7 million messages across email, text, telephone and social media.

➤ Co-creating a flood warning system to alert citizens faster



Switching Mechanism to enable Fujitsu Datacenter UPS to power local water pumps in the event of a flood (United Kingdom)



Dredging of a lagoon to act as a water basin (United Kingdom)



Datacenter emergency access via lagoon preserving biodiversity (United Kingdom)

Flooding Damage Impact Assessments Through Hazard Maps and Measures Against Flooding

Fujitsu and its domestic Group companies conduct impact assessments of flooding damage according to a rainfall scale with two types, depending on the magnitude of the impact on our business, as follows. We identify and assign rankings to business sites which will be highly impacted. If a business site falls under a level 4 impact ranking, we implement various measures.

[Assessment 1 Planned scale (Rainfall on a scale that occurs about once every 10-100 years)]

- Assessment subjects: 169 sites for Fujitsu, 280 sites for Group companies All owned properties and major leased properties (such as sales offices and data centers) in the Fujitsu Group
- Assessment method: We assess whether or not the site falls within the "estimated flood inundation area (planned scale)" for nearby rivers as established by the Ministry of Land, Infrastructure, Transport and Tourism or the prefectural government, as well as the extent of the impact within and outside the site and the impact of flooding on buildings.
We rank sites that were assessed as being impacted by flooding on a scale of 1 (minor impact) to 4 (major impact).

[Assessment 2 [Assumed maximum scale](#) (Rainfall on a scale that occurs about once every 1000 years)]

- Assessment subjects: Domestic data centers and business sites that will be heavily impacted by flooding (such as Fujitsu Solution Square (SS) and the Kawasaki factory)
- Assessment method: We conduct reassessments by upgrading the criteria to "estimated flood inundation area (assumed maximum scale)," and rank the sites on a four-point scale.

[Results for Assessment 1 and Assessment 2 *Only sites with an impact rank of 4 are shown below.]

	Sites	Assessment 1 (Assessment on a planned scale)	Assessment 2 (Assessment on an assumed maximum scale)	Final impact
Fujitsu	Fujitsu SS	Impact rank 4	Impact rank 4	Impact rank 4
Fujitsu	Kawasaki factory	No impact	Impact rank 4	Impact rank 4
Group companies	No sites which fall under impact rank 4			

[Major Measures]



(a) Retaining walls and embankments



(b) Sliding gates



(a) Removable watertight panels



(b) Gates that can be raised and lowered

Fujitsu SS: The site perimeter is protected by retaining walls and watertight panels

Kawasaki factory: Perimeter entrances and exits are protected by watertight panels

Preventing Water Pollution

In order to preserve the water quality of surrounding waterways, including rivers, groundwater and sewers, we have set voluntary controls that are even tougher than legal mandates, and conduct measurement and monitoring on a regular basis. We recover and recycle chemicals used in production processes, instead of discharging them into wastewater. We are also working to properly manage and reduce discharge of harmful substances and other regulated substances (COD, BOD, etc.) by ensuring appropriate chemical use, preventing chemical leaks and penetration, and properly managing the operations of water treatment and purification facilities, among other measures.

Preventing Air Pollution

We have set voluntary control values that are more stringent than legally mandated emissions standards in order to prevent air pollution and limit acid rain. Regular measurement and monitoring are conducted based on these controls. Efforts are also made to appropriately process dust and soot, sulfur oxide, nitrogen oxide, and other harmful substances, and reduce emissions through measures including combustion management at facilities that produce soot and smoke, use of fuels with low sulfur content, and managing the operations of exhaust gas processing equipment. Furthermore, we have installed activated carbon adsorption treatment equipment and are reducing our atmospheric emissions of organic solvent vapors containing substances like VOCs. Moreover, with the enactment in April 2015 of the Act on Rational Use and Proper Management of Fluorocarbons, we have set in-house stipulations and striven for proper management of specified products (commercial refrigerators and air conditioners containing fluorocarbon refrigerants) while working to identify the volume of our fluorocarbon leakage.

In addition, emission of dioxins has been prevented by suspending use of all in-house incineration facilities as of January 2000.

Preventing Destruction of the Ozone Layer

Since fluorocarbons not only destroy the ozone layer but also cause global warming, we have totally eliminated the use of ozone-depleting substances in manufacturing processes (parts cleaning and solvents) by introducing precision water cleaning systems and no-clean soldering technology. On the other hand, with regard to fluorocarbons for refrigerants used in air conditioning facilities (freezers, etc.), we are switching to non-fluorocarbons when equipment is renewed, and are working to appropriately manage and dispose of Class I specified products in accordance with the Fluorocarbons Emission Control Act.

In addition, the annual confirmation of the amount of leakage in the calculation of fluorocarbons indicates that it is less than 1,000 t-CO₂ (not subject to reporting to the minister in charge) for FY 2022.

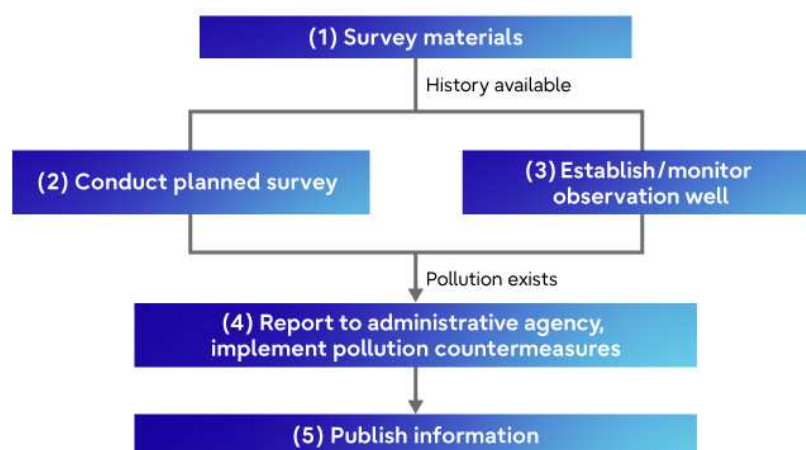
Results for complete elimination of ozone-depleting substances	
Ozone-depleting substances	Time of complete elimination
Washing chlorofluorocarbons (CFC-113, CFC-115)	End of 1992
Carbon tetrachloride	End of 1992
1,1,1-trichloroethane	End of October 1994
Alternative chlorofluorocarbons (HCFCs)	End of March 1999

Preventing Pollution of Soil and Groundwater

We have established rules for soil and groundwater surveys, measures and disclosures. We review these in accordance with changes in the law and social circumstances and respond based on these rules. We systematically examine soil and groundwater, based on the rules, and if pollution is confirmed, we carry out cleanup and countermeasures at each plant according to the situation, while working together with government authorities to disclose information.

As of FY 2021, there are four business sites where soil and groundwater pollution from prior business activities have been confirmed. At those business sites, we have installed observation wells to observe effects outside the site due to groundwater pollution, while also working on purification measures through water-pumping aeration, etc.

Monitor Impact of Groundwater Pollution on Areas Outside of Premises*



*Monitor impact of groundwater pollution on areas outside of premises, which is the greatest risk of soil/groundwater water pollution

Business Sites Where Soil or Groundwater Contamination Has Been Found

Site Name	Location	Cleanup and Measure Execution Status	Maximum Value Found at Observation Well (mg/L)		Regulated Level (mg/L)
			Substance	Measured Value	
Kawasaki Plant	Kawasaki City, Kanagawa Prefecture	We are continuing to clean up VOCs by pumping and aeration.	1, 2-dichloroethylene	2.4	0.04
			Chloroethylene	6.8	0.002
Oyama Plant	Oyama City, Tochigi Prefecture	We are continuing to clean up VOCs by pumping and aeration.	Trichloroethylene	0.58	0.01
			1, 2-dichloroethylene	3.8	0.04
			Chloroethylene	1.6	0.002
Nagano Plant	Nagano City, Nagano Prefecture	We are continuing to clean up VOCs by pumping and aeration.	Chloroethylene	0.033	0.002
FDK Washizu Plant	Kosai City, Shizuoka Prefecture	We are continuing to clean up VOCs by pumping and aeration.	Tetrachloroethylene	0.033	0.01
			Trichloroethylene	0.34	0.01
			1, 2-dichloroethylene	0.61	0.04
			Chloroethylene	0.015	0.002

Chemical Substance Control

To prevent pollution of the natural environment or damage to health due to the use of harmful chemical substances, we are controlling the use of some 1,300 substances using our original Chemical Information System called "FACE" and working to appropriately control and reduce emissions at our business sites.

- ▶ [Fujitsu Group Environmental Action Plan \(Stage IX\): Reducing Chemical Substances Emissions](#)

With regard to chemical substances included in products, we have determined banned substances according to regulations in Japan and worldwide and are working to thoroughly control them, not only inside the Group but also with business partners who deliver materials and products to us.

- ▶ [Green Procurement](#)

Appropriately Processing Waste

In accordance with the Act on Waste Management and Public Cleansing, we appropriately store and manage waste generated from our business sites, select waste disposal companies that can properly dispose of waste, and outsource disposal. Also, we regularly carry out on-site audits in order to confirm that subcontractors are appropriately handling the waste processing tasks we entrust to them. As part of our efforts to reduce waste, we are promoting the reuse of certain plastic trays in cooperation with a vendor that is working to reuse plastic trays and convert them into recyclable materials.

Environmental Liabilities

In properly assessing the Fujitsu Group's expected future environmental liabilities, and communicating our integrity and corporate stance of not deferring our liabilities, we have recorded liabilities of 2.25 billion yen in soil pollution cleanup costs, high-level polychlorinated biphenyl (PCB) waste disposal costs, and asbestos processing costs during facilities demolition, which is the amount we calculate, as of the end of FY 2021, to be necessary for the Fujitsu Group to conduct these tasks domestically in the next fiscal year and beyond.

Conserving Biodiversity

In recent years, risks involving the natural environment have been recognized as serious global risks. This necessitates the disclosure of relevant information disclosure by companies, and toward this end, the Task Force on Nature-related Financial Disclosures (TNFD) is considering an information disclosure framework. If the Fujitsu Group fails to appropriately respond to information disclosure in accordance with the TNFD, its corporate reputation may decline and its ability to procure funds may be affected. Going forward, we will provide disclosures in line with the TNFD framework.

Environmental Management

Green Procurement

We are implementing green procurement alongside our business partners, to provide customers with products and services that have light environmental footprints.

Procurement Activities Based on Green Procurement Direction

The Fujitsu Group summarized its requirements for business partners regarding the purchase of green parts, materials, and products, in the "Fujitsu Group Green Procurement Direction." This standard is posted on a multilingual basis (in three languages) in order to promote penetration to our business partners. We make an effort to communicate by various means, such as briefing sessions or individual meetings if necessary. Through such activities, the Group implements green procurement activities in conjunction with its partners in Japan and overseas and it promotes procurement from business partners that fulfill the green procurement requirements (see below).

Using the Fujitsu Group Environmental Survey Sheet, we conduct annual monitoring of our business partners' statuses with regard to environmental management systems, CO₂ emission reduction, biodiversity preservation, and water resource preservation activities, and ask them to take appropriate measures. When making requests, we provide them with various kinds of information—such as guidance on activities to reduce CO₂ emissions, explanatory documents related to water risk, and the water risk information tool AQUEDUCT—which have been useful for our business partners.

➤ [Fujitsu Group Green Procurement Direction](#)

Green procurement requirements for business partners

Requirement	Business partners (materials/parts)(*1)	Business partners (non-materials/parts)
1. Establishment of environmental management systems (EMS)	✓	✓
2. Compliance with regulations for Fujitsu Group specified chemical substances	✓	—
3. Establishment of chemical substance management systems (CMS)	✓	—
4. CO ₂ emission control/reduction initiatives	✓	✓
5. Biodiversity preservation initiatives	✓	✓
6. Water resource preservation initiatives	✓	✓

(*1) Business partners (materials/parts):
Business partners that supply components for Fujitsu Group products or OEM/ODM products

Establishment of Environmental Management Systems

We request our business partners to establish environmental management systems (EMS)(*2) as a base for ensuring that they independently and continuously improve their environmental-preservation activities. In general, we prefer them to have third party-certified EMS. If this is not possible, we ask them to build EMS incorporating the PDCA cycle suited to their circumstances.

(*2) EMS: Environmental management systems.

CO₂ Emission Reduction Initiatives

The Fujitsu Group also asks our business partners to work toward CO₂ emission reduction in hopes of addressing climate change.

Specifically, we ask them to clearly express the intentions of their initiatives and request that they make efforts to achieve the objectives they set. We also ask them to collaborate with external organizations, where possible, and encourage their own suppliers to make similar efforts, in order to expand the initiatives outside their respective businesses. Our annual Supply Chain Business Continuity Survey gives us a clear picture of how business partners are responding to a variety of climate-change risks, including tsunamis, floods, and torrential rains.

Moreover, as a new initiative, we are asking our main suppliers to establish a CO₂ reduction target based on the international standard of Science Based Targets (SBT) as we strive to further reduce global warming.

Water Resource Conservation Initiatives

As populations grow rapidly and water sources become progressively more contaminated, the increased need for water around the world, as well as water resource scarcity, has become an international challenge. Water resource conservation initiatives are necessary, even in business activities. The Fujitsu Group asks its business partners to investigate and understand the water risks associated with their own companies, and engage in water resource conservation initiatives, such as preventing water pollution and reducing water use.

Acquiring and Managing Information on Chemical Substances Contained in Products

Countries around the world are establishing legal regulations as to the chemical substances contained in products, for instance the RoHS directive (*3) and the REACH regulation (*4). The scope of such regulations is expanding on an almost day-to-day basis, covering more and more substances, products, and applications.

The Fujitsu Group, using chemSHERPA (*5) as its standard format, investigates and acquires information on the chemical substances contained in our products. We share our findings with Group companies via our internal system, and allow relevant parties to access the information whenever necessary. We have established a system that allows for quick adaptation to revisions of laws/regulations and the enactment of new legal systems.

(*3) RoHS directive: Directive on the Restriction of the Use of Certain Hazardous Substances in Electrical and Electronic Equipment

(*4) REACH regulation: Regulation for Registration, Evaluation, Authorization, and Restriction of Chemicals

(*5) chemSHERPA: Chemical Information Sharing and Exchange under Reporting Partnership in Supply Chain

Establishing a Chemical substance Management System (CMS) for Product Substances

The Fujitsu Group not only asks business partners for information on chemical substances contained in their products; we also ask them to establish a Chemical substances Management System (CMS), based on the industry-standard JAMP (*6) guidelines on the management of chemical substances contained in products. Doing so enables the Group to comply even more thoroughly with laws and regulations related to the chemical substances contained in our products.

The Group also carries out CMS audits in order to confirm appropriate establishment and operation of such CMS. More specifically, Fujitsu's auditors implement on-site evaluation of the management status of the chemical substances contained in our business partners' products. If there are any inadequacies, auditors make requests for corrections and provide support for their enactment. Even after the establishment of CMS, we maintain awareness of its operation status through periodic audits.

(*6) JAMP: Joint Article Management Promotion-Consortium.

Environmental Training and Awareness Activities for Employees

The Fujitsu Group conducts various environmental education and awareness activities based on the belief that "Greater environmental awareness and proactive efforts among all employees are essential for pursuing environmental management."

Comprehensive Environmental Training

We offer environmental e-Learning opportunities for all employees through programs in our company-wide training system to promote a basic understanding of environmental management. Training is also conducted on a per-division basis. Specialized trainings such as internal auditor training and training for those in charge of waste practices are also conducted for employees who are in charge of environment-related tasks.



Environmental e-Learning

We offer educational opportunities for employees to comprehensively learn about global trends relating to the environment, the environmental management of the Fujitsu Group, and the role played by each employee, based on the theme of "Environmental Management of the Fujitsu Group and Role of Each Individual Employee" This education is positioned as providing fundamental knowledge that all Fujitsu employees should have under the company-wide employee training system.

<Images of Environmental e-Learning material>

Environmental Management of the Fujitsu Group and Role of Each Individual Employee

Fujitsu Limited

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Role of the Environment in Realizing a Sustainable Society

SDGs (Sustainable Development Goals) and the environment

- The environment-related goals - Goal 6 (Clean Water and Sanitation), Goal 13 (Climate Action), Goal 14 (Life Below Water), and Goal 15 (Life on Land) - support the basis of society.
- The natural environment is the foundation supporting the social lives and economic activities of people. (Refer to following: SDGs Wedding Cake Model)

To realize a sustainable society and ensure people live happily, it is essential to reduce the environmental load of human activities to below levels tolerated by the earth.

Companies are required to contribute to the above-mentioned reduction of load through environment-related activities. Such efforts are vital for the mid- and long-term growth and sustained development of companies.

Source: Azote Images for Stockholm Resilience Centre, Stockholm University (<https://www.stockholmresilience.org/research/research-news/2019/09/14/how-food-connects-all-the-sdgs.html>)

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Fujitsu's Purpose and Environmental Activities

To realize purpose, we established financial/non financial management target

Management based on purpose

Financial Indicator: Business growth and profitability, Core FCF, EPS

Non-financial Indicator: Environment, Customer, Productivity, Human resources

GRB (Global Responsible Business): Human Rights and O&A, Well-being, Environment, Compliance, Supply Chain, Community

Making the World more sustainable

SUSTAINABLE DEVELOPMENT GOALS

Stable, long-term contributions

Creating growth opportunities

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The Fujitsu Group Medium/Long-term Environmental Vision "Fujitsu Climate and Energy Vision"

Over 9 billion people overcome energy, water, and food constraints to create a prosperous society

- Contributing to the realization of carbon neutrality for customers and society
- Aim for net 0* in the entire value chain by 2040

- Achieve CO2 Zero Emission
- Contribution to De-Carbonization
- Contribution to Ease Loss & Damage

Accelerating moves toward carbon neutrality
Innovative energy conservation through cutting-edge technologies
renewable energy;
Strategic use of carbon credits

Connecting Ecosystems in Society and Achieving Optimal Use of Energy as a Whole Society

Building resilient social infrastructure
Stable supply of agricultural products and reduction of food loss

*Reducing CO2 emissions to virtually zero (Source: Ministry of the Environment)

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The Fujitsu Group Environmental Vision

“Fujitsu Climate and Energy Vision”

The Fujitsu Group has reassessed its social role in light of the escalating global commitment to achieving carbon neutrality. The Group has elected to fast-track its previous commitment to achieve “zero CO₂ emissions within the Group by FY2050”, instead bringing forward its Vision by 20 years to FY2030. The Group has set the additional target of reaching net-zero greenhouse gas emissions (*1) throughout the value chain by 2040.

*1 Net-zero greenhouse gas emissions: Reducing greenhouse gas emissions by at least 90% in the target year in comparison to the base year, and re-absorbing remaining emissions (of 10% or less) from the atmosphere through direct air capture (DAC) technologies or by planting trees.

The Importance of Responding to Climate Change

The Intergovernmental Panel on Climate Change (IPCC) Special Report “Global Warming of 1.5°C” articulated the need to limit warming to 1.5 °C above pre-industrial levels and to achieve carbon neutrality by 2050. With social roles expanding and additional demands placed on companies to tackle climate change, in October 2021 the Science Based Target Initiative (SBTi) (*2) launched the world’s first Net-Zero Standard for companies to set net-zero strategies.

In order to resolve issues related to climate change, the Fujitsu Group decided to revise the Group’s previous commitment to “zero CO₂ emissions by 2050”, pursuing instead a more ambitious strategy than simply net-zero. This requires the Group to look beyond social trends and become the very embodiment of a leading SX company, one that drives the achievement of carbon neutrality.

The new vision comprises three pillars, namely, Value chain: Achieve net-zero emissions, Mitigation: Contribute to a carbon-neutral society, and Adaptation: Contribute to climate change adaptation measures. The Fujitsu Group will be quick to leverage advanced DX technologies to tackle its own net-zero strategies, and will make the resulting expertise available as Fujitsu Group solutions for customers and society. In so doing, the Group aims to leverage its own business activities to contribute to climate change mitigation and adaptation

*2 Science Based Target Initiative (SBTi): An initiative jointly established by the United Nations Global Compact, the World Resources Institute (WRI), and other organizations in 2015. It encourages companies to set GHG emission reduction targets consistent with science-based evidence to the level required by the Paris Agreement, validating targets that comply with criteria including indirect emissions not only within the company but also in the supply chain.

Concept



Value chain:
Achieve Net-zero
Emissions



Mitigation: Contribute
to a Carbon-Neutral
Society



Adaptation: Contribute to
Climate Change
Adaptation Measures

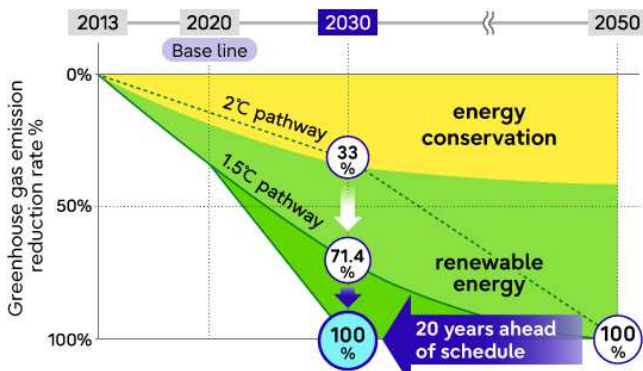
Three pillars of the Fujitsu Climate and Energy Vision

Achieving Net-zero Emissions in the Fujitsu Group Value Chain

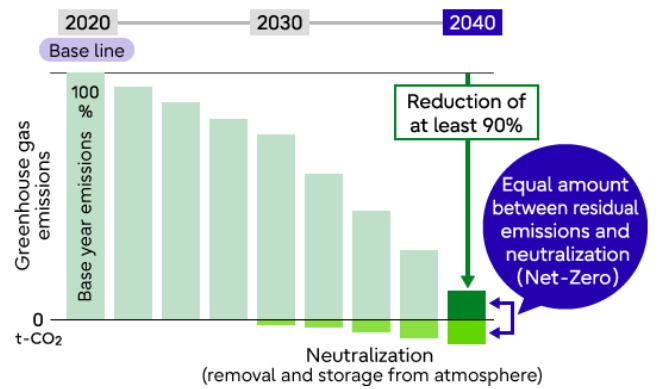
In August 2017, the Fujitsu Group's 2 °C-aligned greenhouse gas emission reduction target earned its SBTi certification. In April 2021, the Group obtained certification for its 1.5 °C ambition level (*3) which increased the target from 33% reduction in emissions to 71.4% throughout its business sites by FY2030, against a baseline of FY2013.

To accelerate the move toward carbon neutrality, the Group set a new target to achieve net-zero emissions from the Group's business activities by FY2030, and from the entire value chain by FY2040, thus earning Net-Zero Target certification from SBTi in June 2023.

*3 1.5°C: According to a report by the Intergovernmental Panel on Climate Change (IPCC), a 1.5 °C increase in average temperature increases the risks of extreme weather, sea level rise, adverse health effects, food shortages, and water scarcity. The United Nations Framework Convention on Climate Change Conference of the Parties (COP) states that the increase in the global average temperature shall be limited to less than 1.5 degrees Celsius above pre-industrial levels in order to avoid the worst effects of climate change.



Emission reduction of Fujitsu Group (Scope 1 and 2)



Emission reduction throughout the value chain (Scope 3)

Roadmap to Net-Zero

Contributing to a Carbon-neutral Society

The Fujitsu Group contributes to the decarbonization of society by creating ecosystems with customers in a variety of industries and business types. The key to mitigating climate change is to use AI and other advanced digital technologies to optimize energy efficiency. By building such technologies into a framework that transcends business, industry, and regional boundaries, the Group will achieve optimal utilization of energy throughout all systems in society.

Contributing to Climate Change Adaptation Measures

The key to adapting to climate change is advanced forecasting technology that uses simulations, AI and big data, enabled through sensing technologies and high-performance computing (HPC). Fujitsu will utilize these to create solutions that lead to resilient societal infrastructure as well as stable supply of agricultural crops and minimal food loss, thereby contributing to minimizing the harm that climate change causes to our customers and to society.

Environmental Vision

Environmental Targets

The Fujitsu Group participates in the following initiatives with the aim of making the Fujitsu Climate and Energy Vision—its medium- to long-term environmental vision—a reality.

Net-Zero Target Certification Gained from Science Based Targets (SBTi)

In August 2017, the greenhouse gas (GHG) emission reduction targets set by the Fujitsu Group for emissions from its business facilities and value chain was approved by the Science Based Targets initiative (SBTi) as meeting the science-based level of ambition criteria. The SBTi was established in 2015 jointly by a number of organizations, including the World Resources Institute (WRI) and UN Global Compact. It encourages companies to set GHG emission reduction targets consistent with science-based evidence to the level required by the Paris Agreement, with the aim of limiting the global average temperature increase caused by climate change to 1.5 degrees above pre-industrial levels.



In April 2021, we updated our target to 71.4% and received acknowledgment of our 1.5 °C-aligned strategy from SBTi.

We have now decided to further advance our existing target and aim for net-zero by FY2040. In June 2023, we received Net-Zero Target certification from the SBTi.

Net-Zero Target

- To reduce GHG emissions at our business sites (Scope 1, 2) and from the entire value chain (Scope 3) by at least 90% by FY2040 against a baseline of FY2020. (*1)

*1 Less than 10% of residual emissions are removed and stored by technologies that directly capture CO₂ from the atmosphere or through absorption by afforestation and other means.

Joining RE100 as Japan's First Gold Member

In July 2018, the Fujitsu Group became Japan's first Gold Member of RE100, an initiative which aims to significantly expand the adoption of renewable energy on a global scale. At the time, the Fujitsu Group pledged to use renewables to provide at least 40% of the electricity consumed across all global sites by 2030, and 100% by 2050.



RE100 is an initiative led by international NGO The Climate Group in partnership with CDP and consists of companies committed to source 100% of their electricity requirements from renewable sources.

With the intention of accelerating its efforts toward carbon neutrality, the Group has since brought forward its previous target date for 100% renewable electricity, shaving off 20 years to achieve 100% by 2030 instead of 2050. To achieve this target, the Group will continue to roll out activities based on the corporate action plan.

The Fujitsu Group will expand its procurement of renewably sourced electricity for data centers outside Japan and other locations in Japan and around the globe by considering the most appropriate means for each region. The Group will concurrently continue its work on R&D and technology trials for energy management and storage, and contribute to the spread of renewable energy in society as a whole.

Environmental Vision

TCFD-Based Information Disclosure

The Task Force on Climate-Related Financial Disclosures (TCFD) was established by the Financial Stability Board at the request of the G20 with the objective of reducing the risk of instability in financial markets due to climate change. The task force announced its recommendations in June 2017, asking companies and organizations to identify and disclose the risks and opportunities arising from climate change. The Fujitsu Group announced its support for the TCFD recommendations in April 2019 and is making every effort to disclose information in line with those recommendations to investors and other stakeholders. Disclosures are provided via media such as financial statements, CDP (*1) questionnaires, the Integrated Report, and websites.

*1 CDP: An international nonprofit organization that conducts environmental surveys of more than 18,700 companies worldwide and acts on behalf of institutional investors with a combined US\$130 trillion in assets. (As of August 2023).

Item		Response status	Reference
Governance	Oversight structure under the Board of Directors for climate-related risks and opportunities	<ul style="list-style-type: none"> In the Fujitsu Group, the Sustainability Management Committee shares the risks and opportunities arising from climate change, deliberates on medium- to long-term issues, and formulates policy. It also reports on the results of these activities to the Board of Directors at meetings of the Executive Management Council. In October 2021, the results of analysis using multiple climate change scenarios, including limiting global warming to 1.5°C, were reported on and discussed by the Sustainability Management Committee. The Risk Management & Compliance Committee regularly reports to the Board of Directors on the most serious risks identified for the group as a whole, including climate risks. The Fujitsu Group has also developed an environmental management system (EMS) based on the ISO 14001 standard. The results of EMS activities are reported to the Board of Directors at meetings of the Executive Management Council. 	<ul style="list-style-type: none"> Sustainability Management in the Fujitsu Group Corporate Governance Environmental Management Systems
	Role of management in assessing and managing climate-related risks and opportunities	<ul style="list-style-type: none"> Fujitsu's CEO, in the role of Chair of the Sustainability Management Committee and the Risk Management & Compliance Committee, bears ultimate responsibility for all decisions made and all business conducted. The Board of Directors are responsible for oversight based on reports received from the Executive Management Council. The Chief Sustainability Officer (CSuO) bears the highest level of responsibility for sustainability, and in that role proposes reforms to the Board of Directors and to senior management and conducts business that relates to sustainability. As of FY2022, ESG indicators that include consideration of climate change issues were added to the evaluation indicators for bonuses paid to Executive Directors. 	<ul style="list-style-type: none"> Risk Management

Strategy	Short-, medium- to long-term climate-related risks and opportunities	<ul style="list-style-type: none"> Based on analyses of climate change scenarios, the Fujitsu Group identifies the risks and opportunities relating to climate change and considers and promotes appropriate responses. Developing services and IT products that contribute to climate change mitigation and adaptation offers opportunities for increased sales, while factors such as physical and regulatory risks have an impact on the operating costs of Fujitsu's operations and supply chain. 	<ul style="list-style-type: none"> Response to Environmental Risks The Fujitsu Group Medium/Long-term Environmental Vision
	Impacts on business, strategy, and financial planning	<p>Note: See the CDP responses (C 2.3, 2.4) for details.</p>	
	Resilience of the organization's strategy, taking into consideration different climate-related scenarios, including a 2°C or lower scenario	<ul style="list-style-type: none"> In 2021, the Fujitsu Group conducted scenario analyses out to 2050 using 1.5°C and 4°C scenarios, focusing on businesses likely to be impacted by climate change. As a result of our analysis with respect to Fujitsu's risk responses and its ability to seize opportunities by helping customers to resolve issues, our assessment showed that Fujitsu's business strategy was resilient in the medium- to long-term. 	
Risk Management	Climate-related risk identification and assessment process	<ul style="list-style-type: none"> Group-wide risk management is conducted by the Risk Management & Compliance Committee. This committee conducts matrix analysis of the results of the risk assessments by each department in terms of impact and likelihood of occurrence. It then identifies and assesses those risks and reports its findings to the Board of Directors. 	<ul style="list-style-type: none"> Response to Environmental Risks Environmental Management Systems Risk Management
	Climate-related risk management process	<ul style="list-style-type: none"> Fujitsu monitors risks using environmental management systems that are based on the ISO14001 standard. The Sustainability Management Committee is responsible for managing the progress of climate change measures. 	
	Status of integration with organization-wide risk management	<ul style="list-style-type: none"> The Risk Management & Compliance Committee identifies and assesses risk for the entire company, including climate change risk. It collaborates with the Sustainability Management Committee to identify, analyze, and assess risks, and then formulates and implements recurrence prevention measures. 	
Metrics and Targets	Metrics used by the organization to assess climate-related risks and opportunities in line with its strategy and risk management process	<ul style="list-style-type: none"> The Fujitsu Group recognizes the importance of reducing greenhouse gas (GHG) emissions and adopting renewable energy sources in addressing climate-related risks. We also believe that the deployment of innovative energy-saving technologies implemented by our company will lead to the acquisition of climate-related opportunities. We therefore use our GHG emissions and our rate of renewable energy adoption as indicators. We have set SBTi certification and RE100 targets as medium- to long-term goals and established the "Environmental Action Plan" for short-term goals. We are monitoring those indicators, managing the progress of our strategies, and conducting risk management. 	<ul style="list-style-type: none"> The Fujitsu Group Medium/Long-term Environmental Vision Fujitsu Group Environmental Action Plan

GHG emissions for Scope 1, 2, and 3	GHG emissions				
	Item		GHG Emissions Performance (FY2022)		
Targets used by the organization to manage climate-related risks and opportunities and performance against targets	Scope 1		65 ktons-CO ₂		
	Scope 2 (Location-based)		476 ktons-CO ₂		
	Scope 2 (Market-based)		341 ktons-CO ₂		
	Scope 3 (Category 1)		1,361 ktons-CO ₂ ★		
	Scope 3 (Category 11)		3,693 ktons-CO ₂ ★		
Climate-related targets & performance					
Item		Targets		Performance (FY2022)	
Reducing the volume of our own GHG emissions ^{*1}	Medium-term	100% reduction by 2030 ^{*2}	SBT net-zero certification	34% reduction	
Reducing the volume of the value chains' GHG emissions ^{*3}	Long-term	90% reduction by 2040		4% reduction	
Renewable energy adoption rate	Medium-term	100% adoption by 2030	RE100 membership	30.0%★ adoption	
*1: vs. 2020 *2: Scope 1 + Scope 2 *3: Scope 1, 2 and 3					

Governance

The Fujitsu Group has established a Sustainability Management Committee, chaired by the CEO. This committee examines medium- to long-term issues, formulates policy, shares the business risks and opportunities of climate change and decides how to address those risks and opportunities, and manages the company's progress. It also reports on the results of its activities to the Board of Directors at meetings of the Executive Management Council. In October 2020, the committee made a key decision by revising the Fujitsu Group GHG reduction target (SBT) from 2.0°C to 1.5°C. In April 2021, the new target was validated as 1.5°C-aligned to the SBTi. In October 2021, the results of scenario analyses using two external scenarios, one for 1.5°C and the other for 4°C, were reported to the Sustainability Management Committee. The findings prompted lively discussion among the committee members on topics such as the need to discuss management strategies, the selection of key solutions, and the measurement of impacts once solutions are provided.

Within the company-wide risk management regime and with oversight by the Board of Directors, the Risk Management & Compliance Committee, chaired by the CEO, conducts risk analysis and implements responses for the entire Group, including on issues relating to climate change. This committee is also the ultimate decision-making body for risk management and reports regularly to the Board of Directors regarding major risks that have been identified, analyzed, and assessed. The Fujitsu Group has also developed environmental management systems (EMS) based on the ISO 14001 standard, and the results of EMS activities are reported to the Board of Directors at meetings of the Executive Management Council.

To further strengthen governance relating to climate change, in April 2022 we added ESG-related third-party evaluations (DJSI^(*2)) and CDP climate change program^(*3) as assessment indices for the bonuses paid to Executive Directors. As of FY2022, these indices will apply to their bonuses. (Executive compensation consists of base compensation, bonuses, and performance-linked stock compensation.)

*2 Dow Jones Sustainability Index (DJSI): This is a share index published by S&P Dow Jones of the United States that analyzes companies with respect to their corporate economic, environmental, and social performance, and selects companies with superior corporate sustainability.

*3 CDP climate change program: A program run by CDP to survey and assess corporate climate change initiatives and publish the results of those surveys.

Strategy

Climate Change Risks and Opportunities

We have identified the risks and opportunities of climate change for the Fujitsu Group, and considered our responses, by analyzing the business impacts of climate change using external scenarios for 2°C of global warming in FY2018, and for warming of 1.5°C and 4°C in FY2021. Our aim is to address the transitional and physical risks that negatively impact Fujitsu operations and supply chains, and to identify the climate-related risks faced by customers so that we can better make proposals that create value and grasp the business opportunities on offer.

Risks

Risk type		Term	Details	Key responses
Transition	Policy/Regulation	Short- to long-term	<ul style="list-style-type: none"> Increased costs due to stronger laws and regulations relating to greenhouse gas emissions and energy use (carbon taxes, energy-saving policies, etc.) Risk of lost corporate value if such laws or regulations are violated 	<ul style="list-style-type: none"> Ongoing reductions in greenhouse gas emissions (increased use of renewable energy, comprehensive energy savings) Strict compliance with laws and regulations through EMS
	Market	Medium- to long-term	<ul style="list-style-type: none"> Surging electricity prices with the shift to a carbon-neutral world (widespread electrification, etc.) 	<ul style="list-style-type: none"> Reduced electricity consumption by formulating internal company standards and developing innovative technology, etc.
	Technology	Medium- to long-term	<ul style="list-style-type: none"> Risk of missing out on business opportunities if we fall behind in fiercely competitive technology development (energy savings, low-carbon services, etc.) and cannot meet market needs 	<ul style="list-style-type: none"> Promote innovation and develop products/services that address customers' climate change issues
	Reputation	Short- to long-term	<ul style="list-style-type: none"> Increased cost of responding to demands from stakeholders (investors, customers, etc.) Negative impacts on ratings and sales due to delays in responding to external demands 	<ul style="list-style-type: none"> Formulation and promotion of our Medium/Long-term Environmental Vision and Environmental Action Plan Proactive information disclosure to ensure transparency in our climate change strategy
Physical (Natural disasters etc.)	Chronic/Acute	Short- to long-term	<ul style="list-style-type: none"> Increased cost of responding to changing rainfall/weather patterns, higher average temperatures, higher sea levels, droughts, etc. Increased recovery costs when operations, including supply chains, stop due to increasingly severe abnormal weather events 	<ul style="list-style-type: none"> Implement measures such as greater multi-sourcing, stronger BCP measures, and conducting surveys of suppliers' business continuity systems Assess potential water risks and undertake monitoring

Opportunities

Opportunity type	Term	Details	Key responses
Products/services	Short- to long-term	<ul style="list-style-type: none"> Increased sales by developing and supplying products and services that are highly energy-efficient 	<ul style="list-style-type: none"> Development and supply of high-performance, energy-saving 5G virtualization base stations, high-performance, low-energy supercomputers, etc.
Market	Short- to long-term	<ul style="list-style-type: none"> Seizing new market opportunities for climate change solutions created using ICT 	<ul style="list-style-type: none"> Development and supply of measures to calculate and visualize CO₂ emissions in supply chains and more efficiently search for new materials in the shift to zero emissions
Resilience	Short- to long-term	<ul style="list-style-type: none"> Increased sales through new products and services for resilience enhancement 	<ul style="list-style-type: none"> Development and supply of disaster prevention information systems and AI predictive water management systems to forecast river levels during floods

Scenario Analysis

Premise

In FY2021, the Fujitsu Group conducted scenario analyses out to 2050 using scenarios for 1.5°C and 4°C of global warming. The analyses studied businesses likely to be impacted by climate change in the following areas: Sustainable Manufacturing (sectors studied: petrochemicals, automotive, foods, electronic device-related businesses), Trusted Society (sectors studied: public sector, transportation, energy-related businesses), and Hybrid IT (sector studied: datacenter-related businesses).

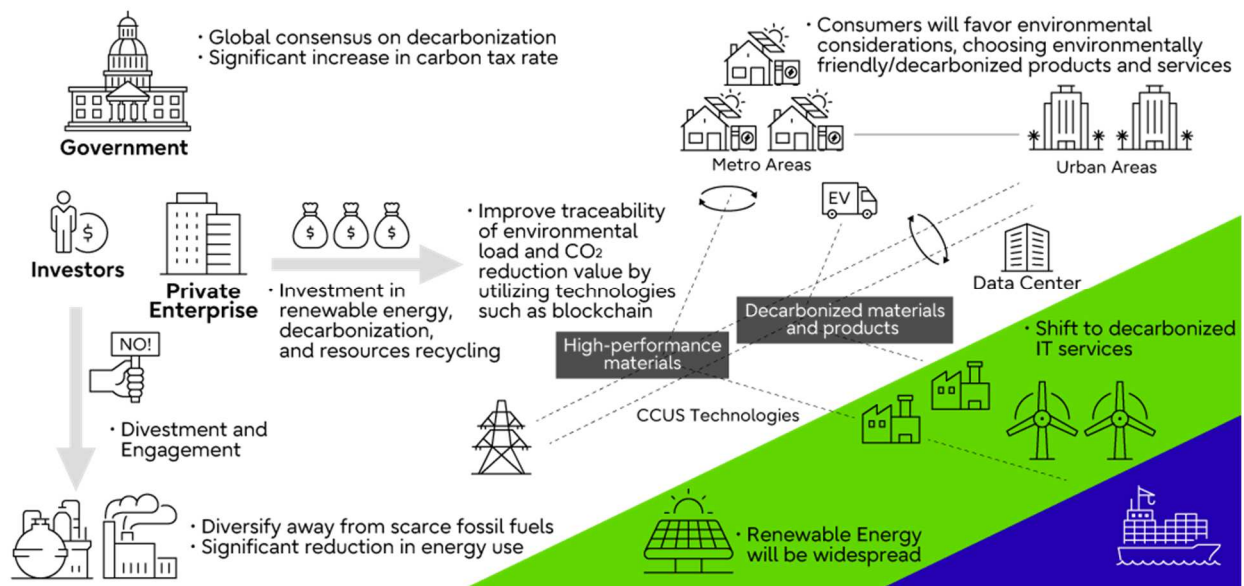
Scenario selection	<ul style="list-style-type: none"> 1.5°C, 4°C scenarios *Established with reference to information published by the IPCC, the IEA, governance agencies such as the Ministry of the Environment and the Japan Meteorological Agency, and various private research organizations. For the main reference scenarios, RCP 8.5 and RCP 2.6 are used as physical scenarios, and IEA NZE 2050 (Net Zero Emissions by 2050 Scenario) and IEA STEPS (Stated Policies Scenario) are used as transition scenarios.
Target businesses	<p>Opportunity-focused analysis: Addressing climate-related risk in client industries</p> <ul style="list-style-type: none"> Sustainable Manufacturing (sectors studied: petrochemicals, automotive, foods, electronic device-related businesses) Trusted Society (sectors studied: public sector, transportation, energy-related businesses) <p>Analysis of both risks and opportunities: Addressing climate-related risk in Fujitsu businesses and client industries</p> <ul style="list-style-type: none"> Hybrid IT (sector studied: datacenter-related businesses)
Period covered	<ul style="list-style-type: none"> 2050

Analysis steps & details

The analysis was conducted in 4 steps: assessment of risk severity, definition of scenarios, evaluation of impacts on business, and discussion of countermeasures.

We began by organizing the risks and opportunities for the target businesses based on data such as the TCFD recommendations and external reports. We also conducted workshops to look at the qualitative aspects of business impacts stemming from each risk and opportunity item from the perspectives of Fujitsu and industry generally. We rated the severity of each risk or opportunity as “High”, “Medium” or “Low”. We then considered the future changes in each of the items classified as having a “High” severity and defined our scenarios using data from agencies such as the IPCC, IEA, and the Ministry of the Environment, together with the evidence provided in various reports. Specifically, we held an executive input session to consider global outlooks for 2050 given temperature rises of 1.5°C and 4°C, and then went on to consider the global outlook for each of the target industries, using tools such as Five Forces analysis. (See below for the 1.5°C global outlook.)

Global outlook of a 1.5°C “carbon-neutral world in 2050”



To look at the impacts on business, we then tentatively calculated the qualitative gap between the scenarios and our existing strategies and plans with respect to risks and opportunities. For Hybrid IT (sector studied: datacenter-related businesses), we discussed how the impacts of climate change on business would affect our Profit and Loss Statement, specifically looking at which financial indicators would be impacted and in what ways. We then summarized those impacts by developing calculation logic for each impact. Both internal and external data and information were used to confirm the positive (opportunities) and negative (risks) impacts on operating profit in 2050. For example, the calculations for the 1.5°C scenario showed rising costs due to changes in power prices, but also revealed that there will be increased demand for carbon-neutral datacenters and for datacenters generally due to increased communications traffic as the uptake of smart devices accelerates. Overall, the calculations showed that the negative financial impacts of risks will be outweighed by the positive financial benefits arising from opportunities, ultimately leading to a net positive financial impact on operating profits.

Our analysis of Sustainable Manufacturing (sectors studied: petrochemicals, automotive, foods, electronic device-related businesses) and Trusted Society (sectors studied: public sector, transportation, energy-related businesses) focused on the business opportunities arising from climate change, assuming the potential to establish new climate change-related markets and concluding that the net impact on sales in 2050 would be positive.

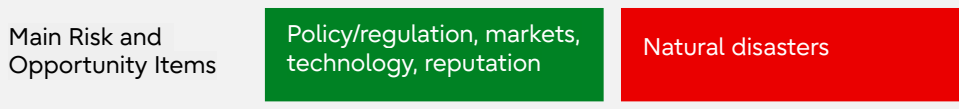
Finally, we held a workshop in which we organized the trends in each industry that had been identified when defining the scenarios and the direction of measures to deal with the business impacts requiring emphasis. In specific terms, during the group work we reviewed the current initiatives and gathered views on the directions that future initiatives should take, taking into account the expectations on Fujitsu in the medium- to long-term.

Analysis results

Because we were able to confirm that the study and development directions for our business unit offerings are aligned with the opportunities shown in the scenario analyses, and that countermeasures for the identified risks are also being prepared, our assessment was that Fujitsu’s businesses are strategically resilient from a medium- to long-term perspective.

Our current themes and areas are “Carbon Neutrality” and “Resilient Supply Chains” in the Sustainable Manufacturing area, and “Sustainable Energy & Environment” and “Sustainable Transportation” in the Trusted Society area, and we are progressing with the development of our offerings.

Opportunity Analysis



Target businesses	Sectors studied	Risk severity assessment (both 1.5°C and 4°C)		Scenario definitions	Countermeasure considerations (in part)
		Policy/regulation, markets, technology, reputation	Natural disasters		
Sustainable Manufacturing	Petrochemical businesses	Proliferation of ICT in recycling-based business platforms in the shift to carbon-neutrality Carbon pricing, Emissions targets, Energy-saving measures, Key product/service price variations	Increased damage to factories/supply chains due to heightened risk of natural disasters Flooding/Changing weather patterns, More severe abnormal weather events	1.5°C scenario	
				Switch to environmentally friendly products that use carbon-neutral materials throughout the supply chain, increasing portfolio reform, increased demand for greater traceability and more efficient R&D	<ul style="list-style-type: none"> • Visualization of CO₂ emissions throughout the supply chain, support for strategies and policies aimed at carbon-neutrality • Eco-friendly materials development solutions that use materials informatics • Management visualization with an ESG pivot, formulation and implementation of SX measures through data-driven management
				4°C scenario	
				Increased demand for resilient factories and supply chains due to increasingly severe natural disasters	<ul style="list-style-type: none"> • Support for risk event simulation and timely provision of risk information • Rapid solutions through data-driven management (review of manufacturing systems, suppliers, SCM, etc.)

Automotive businesses	<p>Stronger regulation of internal combustion engines; widespread adoption of electric vehicles, move toward carbon-neutrality in the entire product life cycle</p> <p>Carbon pricing, Emissions targets, Key product /service price variations, Proliferation of next-generation technology, Changes in investor sentiment</p>	<p>Increased damage to factories/supply chains due to heightened risk of natural disasters</p> <p>Flooding/ Changing weather patterns</p>	1.5°C scenario	
			<p>Increased demand for services such as MaaS and greater supply chain traceability to help reduce environmental impacts through the entire life cycle</p>	<ul style="list-style-type: none"> • Visualization of CO₂ emissions throughout the supply chain, support for strategies and policies aimed at carbon-neutrality • Support for EV demand (e.g., circular management of EV batteries) • Management visualization with an ESG pivot, formulation and implementation of SX measures through data-driven management • Process automation services using digital technology, from design through to manufacturing and maintenance
			4°C scenario	
			<p>Faster rollout of internal combustion engines, increased demand for advanced technology. Also, increased demand for enhanced business continuity and stability in raw materials procurement in the face of more severe natural disasters</p>	<ul style="list-style-type: none"> • Support for risk event simulation and timely provision of risk information • Rapid solutions through data-driven management (review of manufacturing systems, suppliers, SCM, etc.) • Engineering outsourcing service which contributes to acceleration of development processes/technology and selection of management resources
Food-related businesses	<p>Increased awareness of ethical consumption, promotion of resource recycling and biodiversity, etc.</p> <p>Key product /Service price variations, Proliferation of next-generation technology</p>	<p>Increased damage to agriculture due to heightened risk from natural disasters and temperature rises</p> <p>Higher average temperatures, More severe abnormal weather events</p>	1.5°C scenario	
			<p>Changed consumer awareness leading to increased demand for measures to deal with food waste and support for smart agriculture, certificates of origin, and environmentally friendly packaging materials</p>	<ul style="list-style-type: none"> • Visualization of CO₂ emissions throughout the supply chain, support for strategies and policies aimed at carbon-neutrality • Support for greater traceability throughout the value chain (supply-demand optimization, help with changes in consumer behavior) • Management visualization with an ESG pivot, formulation and implementation of SX measures through data-driven management
			4°C scenario	
			<p>Increased demand for "resilient agriculture" to cope with issues of stable food supply resulting from natural disasters</p>	<ul style="list-style-type: none"> • Support for risk event simulation and timely provision of risk information • Rapid solutions through data-driven management (review of manufacturing systems, suppliers, SCM, etc.)
Electronic device-related businesses	<p>Energy savings in factories and growth in the market for products for EVs; potential for fundamental manufacturing reforms, such as 3D printers and the "buy local" movement</p> <p>Carbon pricing, Emissions targets, Key product /service price variations, Proliferation of next-generation technology, Changes in investor sentiment</p>	<p>Increased damage to factories/supply chains due to heightened risk of natural disasters, water shortages</p> <p>Flooding/ Changing weather patterns</p>	1.5°C scenario	
			<p>Proliferation of energy/labor-saving technologies. Increased demand from radical changes to business models (demand chains, etc.)</p>	<ul style="list-style-type: none"> • Visualization of CO₂ emissions throughout the supply chain, support for strategies and policies aimed at carbon-neutrality • Process automation services using digital technology, from design through to manufacturing and maintenance • Management visualization with an ESG pivot, formulation and implementation of SX measures through data-driven management
			4°C scenario.	
			<p>Increased demand for higher labor productivity in production sites and the construction of factories and supply chains capable of handling the risks posed by natural disasters</p>	<ul style="list-style-type: none"> • Process automation services using digital technology, from design through to manufacturing and maintenance • Support for risk event simulation and timely provision of risk information • Rapid solutions through data-driven management (review of manufacturing systems, suppliers, SCM, etc.)

Trusted Society	Public sector, transportation, energy-related businesses	The values by which we select cities and services, such as environmental concerns, will change as we shift to carbon neutrality	Increased damage to cities, buildings, and infrastructure due to heightened risk from natural disasters	1.5°C scenario	
				Increased demand for quantifying and visualizing new values, such as environmental concerns, and the digitalization of urban and energy infrastructure	<ul style="list-style-type: none"> Services/solutions related to prediction and regulation of the energy supply-demand balance using real-time data as green energy is used to transition to a carbon neutral society
		Carbon pricing, Emissions targets, Key product/service price variations	Flooding/Changing weather patterns, more severe abnormal weather events	4°C scenario	
				Increased demand for resilient urban infrastructure	<ul style="list-style-type: none"> Construction of Digital Twin platforms, enhanced use of simulations, optimization of urban infrastructure that caters for population flows and individuals, support for resilience in transport and logistics, disaster prevention/minimization, etc.

Risk & Opportunity Analysis

Target businesses	Sectors studied	Risk severity assessment (both 1.5°C and 4°C)		Scenario definitions	Countermeasure considerations (in part)
		Policy/regulation, markets, technology, reputation	Natural disasters		
Hybrid IT	Datacenter-related businesses	Traceability of environmental values, datacenter electrification, and the adoption of smart technology will all progress	Increased damage to datacenters due to heightened risk from natural disasters	1.5°C scenario	
				Energy savings and environmental concerns become the standard for service selection by customers, and carbon neutrality in datacenters themselves becomes a source of competitive strength	<ul style="list-style-type: none"> Highly energy-efficient datacenters, etc.
		Emissions targets, Key product/service price variations, Proliferation of next-generation technology, Changes in customer sentiment	Higher average temperatures, More severe abnormal weather events	4°C scenario	
				Increased demand for resilient datacenters. Disaster risk for Fujitsu-owned datacenters is also increasing and countermeasures are needed	<ul style="list-style-type: none"> Disaster recovery center services in case disasters occur Resilient earthquake-proof datacenters equipped with every security measure, etc.

* The above scenario analyses are intended to verify the strategic resilience of Fujitsu businesses based on an assumed hypothesis and are positioned as one simulation that takes into account future uncertainties.

Risk Management

As part of our company-wide risk management system, we have established the Risk Management and Compliance Committee to identify, assess and manage risks across the entire Fujitsu Group, including those related to climate change. To conduct company-wide risk assessments on a regular basis, the committee prepares tools, distributes them to each Risk Management & Compliance Officer and gathers responses. The departments in charge of each risk across the company utilize these tools to conduct assessments on items such as the impact and likelihood of occurrence related to risk threats and the status of countermeasures, and they also provide responses regarding those risk threats. Climate change-related risk assessments are conducted by all relevant departments, using information collected from across the company, based on the expertise of each department in areas such as policy, reputation, natural disasters, the supply chain, and products and services. The Risk Management and Compliance Committee conducts an integrated matrix analysis of the assessments returned by each department with respect to impact severity and likelihood, and

then identifies high-priority risks at the company-wide level. The results of this analysis are reported to the Board of Directors.

The Sustainable Management Committee shares the business risks, opportunities, and countermeasures resulting from climate change, and manages their progress. The Fujitsu Group has also established environmental management systems based on the ISO 14001 standard. Under these systems, we monitor regulatory compliance and other risks.

Metrics and Targets

In 2017, the Fujitsu Group obtained 2°C-aligned certification from the SBTi for its GHG emissions reduction targets, and in 2021 we were granted 1.5°C-aligned certification for our revised targets. To accelerate our efforts towards carbon-neutrality, we set new targets to achieve net-zero emissions from our business activities by FY2030 and net-zero emissions through our entire value chain by FY2040 and were granted net-zero certification by the SBTi. In line with the SBT updates, we have also revised our RE100 renewable energy target, bringing our target of 100% renewables by 2050 forward by 20 years and aiming to achieve 100% renewable energy by FY2030.

Against our target of 100% Scope 1 and 2 GHG reductions in our own emissions by FY2030, in the current year we achieved a reduction for FY2022 of 34% on FY2020 levels. Against our target of a 90% reduction (on FY2020 levels) in GHG emissions throughout the value chain (scope 1, 2 and 3 emissions) by FY2040, we also achieved a 4% reduction in FY2022.

We boosted our use of renewable energy up to 30.0% in FY2022 towards our target of 100% renewable energy use by FY2030.

Living in Harmony with Nature (Conservation of Biodiversity)

Vision and Short- to Mid-term Targets

Together with climate change, the loss of biodiversity is seen as a serious and urgent problem, and the delivery of nature-positive outcomes is considered essential to its resolution. At the G7 Summit, held in June 2021, we agreed on a G7 2030 Nature Compact, which includes a commitment to “halt and reverse biodiversity loss by 2030”. During part 2 of the 15th Conference of the Parties to the UN Convention on Biological Diversity (CBD-COP15) - held in December 2022 - the Kunming-Montreal Global Biodiversity Framework, which includes international targets for 2030, was adopted. The framework establishes “23 Global Targets for 2030” aimed at the 2030 Mission “To take urgent action to halt and reverse biodiversity loss to put nature on a path to recovery for the benefit of people and planet” (excerpt).

Committed to delivering nature-positive outcomes, in 2022 the Fujitsu Group formulated its vision for 2050, its 2030 Mid-term Target, and its 2025 Short-term Target (Environmental Action Plan Stage XI) in line with international targets (Kunming-Montreal Global Biodiversity Framework). Achieving the vision will contribute to satisfying the Fujitsu Group’s stated purpose to “Make the world more sustainable by building trust in society through innovation.”

Vision (2050)	Create a world in harmony with nature, where "nature and biodiversity," which are fundamental to a sustainable society, are fully restored through digital technology
Mid-term Target (2030)	Reduce negative impacts on biodiversity by at least 25% (Base year : FY2020) in the area of company's corporate activities, including supply chain, and promote activities to increase positive impacts on it.
Short-term Target (2025)	Reduce negative impacts on biodiversity by at least 12.5% (Base year : FY2020) in the area of company's corporate activities, including supply chain, and promote activities to increase positive impacts on it.

Response to the Taskforce on Nature-related Financial Disclosures (TNFD)

The Fujitsu Group will implement disclosures in accordance with the TNFD Framework going forward. In addition to comprehensive evaluations of corporate activities as a whole using ecological footprint as an indicator, we will conduct an evaluation of regional characteristics with reference to the TNFD Guidelines, etc. In terms of the evaluation pertaining to regional characteristics, the Group will first evaluate the use of land and water resources at its own sites, and then expand the scope of evaluation to include other corporate activities and value chains. The results of these evaluations will be disclosed as appropriate. The Group will comply with all disclosures in accordance with the TNFD framework by FY2025.

Biodiversity Conservation Activities

The Fujitsu Group is undertaking various biodiversity conservation activities to achieve its vision and targets.

Activity Example 1: Complying with the Environmental Action Plan Target to “Visualize and reduce the impact of corporate activities on ecosystems and on biodiversity”

As one of the targets of Stage X of its Environmental Action Plan, the Fujitsu Group has set a target for conserving nature and biodiversity, and has commenced activities to evaluate and reduce the dependence on and impact of the Group’s corporate activities on nature and biodiversity.

- [Living in Harmony with Nature \(Conservation of Biodiversity\)](#)

Activity Example 2: Contributing to 30by30 (*1) (Ministry of the Environment: Activity to Gain Certification for Conserved Areas Living in Harmony with Nature)

Just under 80% of the approximately 53 ha site occupied by the Fujitsu Numazu Plant is given over to green space to nurture the precious biodiversity of the region. The factory manages the green space with the aim of preserving the natural environment, maintaining the landscape, and providing a place for employees and local residents to learn about the natural environment. In 2022, Numazu Plant’s green space program participated in the screening process of a trial scheme to test a system established by the Ministry of the Environment (MOE) to certify conserved areas identified as Living in Harmony with Nature. The MOE trial deemed the Numazu Plant green space “equivalent to Certified”. If certified as a Living in Harmony with Nature site, the certified area (excluding overlaps with protected areas) will be registered in the international database as an OECM area (*2), thereby contributing to the achievement of the 30by30 target. The Fujitsu Numazu Plant aims to acquire Living in Harmony with Nature certification during FY2023.

- *1 30by30: A target which aims to effectively conserve 30% of land and sea areas as healthy ecosystems by 2030 with the goal of halting and reversing biodiversity loss by 2030 (nature-positive outcome)
- *2 OECM (Other Effective area-based Conservation Measures): Areas, other than Protected Areas such as company-owned forests and mountain villages and the woodlands around them, that contribute to biodiversity conservation

- [Outline of sites participating in the early trial phase of Areas Living in Harmony with Nature \(working title\) \(MOE website\) \(Japanese text only\)](#)
- [Fujitsu Numazu Plant is awarded the 2023 Prime Minister’s Commendation for Meritorious Service to the Greening Promotion Campaign \(Japanese text only\)](#)

Activity Example 3: Supporting Biodiversity Conservation by Providing Funds, Technology, and Talent

The Fujitsu Group supports the activities of organizations that implement biodiversity conservation. These activities are ranked as activities that will increase the positive impact on biodiversity in the Group’s short- and mid-term targets.

1. Blakiston’s Fish Owl Call Recognition Project
The Fujitsu Group has provided the Wild Bird Society of Japan with call recognition software, developed for use in habitat surveys of the endangered Blakiston’s fish owl. Implementing measures based on habitat survey results is important for the conservation of the species. Surveys are conducted by analyzing sound data recordings, but the main problem for the Wild Bird Society was that playing and replaying the recorded sounds to identify the Blakiston’s fish owl was enormously time-consuming. By providing the call recognition software, we helped streamline the surveys to enable the automatic extraction of the owl’s cries, thus greatly reducing the time required for analysis.
 - [Blakiston’s Fish Owl Call Recognition Project](#)
2. Supporting the Harapan Rainforest (Forest of Hope)
We continually provide support to a project launched by BirdLife International Tokyo for reforestation activities in the Harapan Rainforest (Forest of Hope) on the Indonesian island of Sumatra. Dealing with forest fires and illegal logging is an urgent issue in the Harapan Rainforest. This activity contributes to forest conservation by implementing ICT to greatly improve the efficiency of forest patrol operations.

- [Providing support for the Harapan Rainforest \(Forest of Hope\) in Indonesia](#)
- [Activity Brochure here](#)

3. Coastal cleanup activities on Tsushima, An Island Seriously Contaminated by Marine Plastics
 To deepen employees' awareness of the global environmental issue of marine plastic pollution, and link this to action to deal with the problem, Fujitsu Limited held a hands-on eco-tour of Tsushima for Fujitsu Group employees in collaboration with the Japan Environmental Action Network (JEAN). The project involved a beach cleanup, and an ideathon to come up with solutions to the island's marine plastics problem.

- [Tsushima, an island seriously contaminated by marine plastics](#)

Activity Example 4: Promoting Initiatives in Collaboration with External Organizations (Keidanren, WIPO, JBIB)

The Fujitsu Group collaborates with various external organizations to promote initiatives for conserving biodiversity. For example, we support The Declaration of Biodiversity by Keidanren and participate in the Initiative based on the Declaration of Biodiversity by Keidanren. A further example is the promotional video for the Business for GBF Project launched by MOE and Keidanren, featuring our case study Blakiston's Fish Owl Call Recognition Project. Fujitsu also participates as a partner in WIPO GREEN, a matchmaking platform operated by the World Intellectual Property Organization (WIPO) for transferring environmental technologies and services. This led to the conclusion of IP licensing agreements with academic institutions for the use of technologies for conserving natural assets and biodiversity. In addition, Fujitsu participates in the Japan Business Initiative for Biodiversity (JBIB), hosting activities together with enterprises for the purpose of research and practice in biodiversity conservation.

- [Initiative based on The Declaration of Biodiversity by Keidanren \(Keidanren website\)](#)
- [Business for GBF Project \(MOE website\)](#)
- [Promotional video for Business for GBF Project \(MOE video\)](#)
- [Conclusion of IP licensing agreements through WIPO GREEN activities](#)
- [Japan Business Initiative for Biodiversity \(JBIB\) \(JBIB website\)](#)

Activity Example 5: E-learning for Employees

The Fujitsu Group provides environmental education through e-learning programs for all employees to improve their environmental engagement. The programs include content on global trends in biodiversity and the relationship between corporate activities and biodiversity, the intention being to deepen their understanding of how their work relates to biodiversity.

Global Trend Related to Nature (Biodiversity) FUJITSU

- **Biodiversity loss** is the third most serious risk according to the **Global Risk Report 2022** published by the **World Economic Forum**.
- Dealing with risk: **Nature-Positive**
 - ◆ G7 2030 Nature Compact: commit to the global mission to **halt and reverse biodiversity loss by 2030**.
 - ◆ Fifteenth meeting of the Conference of the Parties to the Convention on Biological Diversity (Part One), Kunming Declaration **reverse the current loss of biodiversity and ensure that biodiversity is put on a path to recovery by 2030 at the latest**.
 - ◆ "A Nature-Positive World: The Global Goal for Nature": Announcement of **Goal for Nature-Positive**.
- **A portfolio of actions to reduce loss and restore biodiversity**
 - ◆ Achieving nature positives requires all of the following actions
 - 1 **Enhanced conservation and restoration of ecosystems**
 - 2 **Climate change mitigation**
 - 3 **Action on pollution, invasive alien species and overexploitation**
 - 4 **More sustainable production** of goods and services, especially food
 - 5 **Reduced consumption and waste**

Biodiversity loss is a global risk. Nature-positive is essential.

Relationship Between Corporate Activities and Nature (Biodiversity) FUJITSU

Corporate activities **depend on** and **influence nature**

Corporate value chain: Procurement, Production, Distribution, Sales, After-sales, Recycle

Corporate activities: Agriculture, Forestry, Fishery, Mining; Transportation, Manufacturing, Wholesale, Retail, Consumer, Medical services etc.; Energy, Gas, Water supply, Real estate, Construction, Finance, Service, Medical services etc.

Supplementary Explanation: Human society is supported by benefits from natural ecosystems (ecosystem services), such as food and water supplies and climate stability.

Provisioning services	Regulating services	Habitat services	Cultural services
- Agricultural crops - Non-timber forest products - Seafood - Freshwater - Raw materials	- Climate - Air quality - Water - Soil - Disease mitigation - Biological control	- Provision of habitat - Conservation of genetic diversity	- Religion / Festivals - Education - Landscapes - Traditional arts & crafts - Tourism / Recreation

Source: The Global Biodiversity Outlook 6 (GBO6) (https://www.iod.int/gbo6)

Source: Guidelines for private sector engagement in Biodiversity (Japan's Ministry of the Environment)

- ◆ **Targets and Rules for Nature-Positive** related to corporate activities
 - ◆ **Post-2020 global biodiversity framework (2030 International Target)**: Decision expected at COP15 Part2
 - ◆ **TNFD** (taskforce on Climate-related Financial Disclosures): During the formulation of the framework
 - ◆ **SBTs for Nature** (Science-Based Targets for Nature): Development of target setting method
 - ◆ **Declaration of Biodiversity of the Japan Federation of Economic Organizations**: 236 companies participated

Reference: Biodiversity Conservation Activities of the Fujitsu Group [Details]

Fig. Image of environment e-learning materials

Fujitsu Group Biodiversity Action Principles

In October 2009, the Fujitsu Group established its "Biodiversity Action Principles" to explicitly address biodiversity.

- [Fujitsu Group Biodiversity Action Principles](#)

Environmental Action Plan

Fujitsu Group Environmental Action Plan

Operating Environment and Growth Strategy

Changing Environmental Activities in Line with Our Business Model Transformation

Originally a manufacturer of telecommunications equipment, Fujitsu developed into a global ICT enterprise with vertically integrated operations in three sectors: Technology Solutions offers a range of IT-based services and solutions, Ubiquitous Solutions designs and manufactures products such as PCs and mobile phones, and Device Solutions is responsible for developing the semiconductor business. Structural reforms undertaken since FY 2015 have channeled most management resources into the core sector of Technology Solutions. In FY 2019, Fujitsu repositioned itself as a Digital Transformation (DX) enterprise that aims to make full use of digital technologies in the creation of innovative services and business processes.

The nature of the Fujitsu Group's environmental impact has changed as a result of this modified business model. As an example, most energy consumption in the past was linked to the manufacture of PCs and our semiconductor and electronic component operations, but that requirement is declining significantly. Conversely, the expansion of cloud computing and the Internet of Things (IoT) is driving increased power consumption in data centers, and this growing trend is expected to continue. We are therefore focusing at present on energy conservation, efficiency enhancements and the use of renewable energy in our data centers. In this way, the Fujitsu Group is implementing environmental activities that respond to the demands of society while also supporting the corporate growth strategy.

Operating as a Responsible Global Corporate Citizen

Recent years have seen a further ramping up of demand for initiatives aimed at building sustainable communities on a global scale, including the adoption of the Sustainable Development Goals (SDGs) by the United Nations and the coming into effect of the COP 21 Paris Agreement. The Fujitsu Group employed a materiality analysis in a Groupwide review designed to enhance the effectiveness of activities that aim to contribute to sustainable development. This analysis identified six priority issues including the environment; human rights, diversity and inclusion; wellbeing; and supply chain. The result is a unified framework under the banner of Global Responsible Business (GRB), which will oversee activities that strengthen initiatives in non-financial areas while striving for 'sustainability management' worthy of a responsible global corporate citizen.

History of the Environmental Action Plan

Environmental Awareness Contributes to Sustainability for Our Customers and Society

The Fujitsu Group has formulated an Environmental Action Plan since 1993 and continues to broaden the scope of its environmental activities. Between stages I and V (FY 1993-2009) the objective was to significantly reduce the environmental impact of the Fujitsu Group itself. Far-reaching measures were implemented throughout our factories and offices to cut CO₂ emissions and chemical pollutants, to reduce waste, and so on. In stage VI (FY 2010-2012), we expanded the focus of our activities to three important initiatives. In addition to strengthening measures to lessen our own impact on the environment, we supported similar efforts by customers and society as a whole and also took on the challenge of conserving biodiversity. Between stages VII and IX (FY 2013-2020), we clearly demonstrated our commitment to contributing to the resolution of environmental issues faced by customers and society through the use of ICT. In order to reduce our own environmental impact, we expanded the scope of our activities to cover the entire supply chain, including suppliers. In stage X (FY 2021-2022), we worked to promote and expand the use of renewable energy for our customers and society by utilizing leading-edge ICT technologies unique to the Fujitsu Group, such as the introduction of renewable energy at our business sites through CPPA and other means, and blockchain technology.

The Fujitsu Group will continue responding to the demands of changing times and will deepen and further develop its environmental activities with the goal of helping to create a sustainable and rewarding society.

Fujitsu Group Environmental Action Plan (Stage XI)

Social responsibility as a leading company in Sustainability Transformation (SX)

As a leading company in SX, Fujitsu Group is committed to reducing the environmental impact of its group companies, including those in the supply chain, and to expanding and enhancing the value it provides to customers and society through technology. We will work with our customers and partners to realize a sustainable future.

Outline of the Fujitsu Group Environmental Action Plan (Stage XI)

In order to resolve environmental and social issues, we have set eight targets in three global risks areas highlighted by the World Economic Forum: "Climate Change," "Resource Circulation," and "Living in Harmony with Nature". These are mapped against the two values of "Customers and Society" and "Fujitsu and Supply Chain".

Fujitsu group is taking firm steps to realize its environmental vision, such as contributing to digital technology for customers and society and increasing the ratio of its own use of renewable energy.

(Reference: [Global Risks Report 2023](#))

Target period

3 years from Fiscal year 2023 to Fiscal year 2025

Customers and Society

Fujitsu aims to transform its core business with a portfolio of offerings focused on ESG Contribution and SX by 2030. In particular, to solve environmental issues in the areas of climate change and carbon neutrality, resource recycling through circular economies, and biodiversity, we will connect stakeholders from across society and industries and contribute to the SX of customers and people around the world. In FY 2023, we will develop environmental contribution metrics to measure our impact on the environment, allowing us to provide services with clear contributions and value. From FY 2024, we will measure and disclose the quantitative amount of our contribution. Furthermore, as an SX leader and to realize a sustainable society in which no one is left behind, we will develop solutions, services and initiatives that contribute to SX, deliver objective environmental metrics and earn the trust and recognition of global customers and society.

Fujitsu and Supply Chain

Climate Change

In order to achieve Net Zero (*1) emissions of greenhouse gases from our business activities and from the entire value chain, we set reduction targets for FY2025.

This will be achieved through the strategic introduction of renewable energy and the development of energy conservation through the use of advanced ICT. At the same time, we will also promote the understanding and reduction of the environmental impact of suppliers, as well as further energy saving of our products.

*1 Net Zero Greenhouse Gas Emissions: Reduce greenhouse gas emissions by 90% or more from the base year in the target year and remove residual emissions of 10% or less by directly recovering CO₂ from the atmosphere (DAC) or by absorbing CO₂ through planting trees.



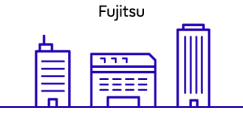

Resource Circulation

We aim to develop these products and services in FY 2025 in order to design products that conserve resources and improve the resource recycling rate, and to build a circular economy business model that can overcome resource constraints. We will also continue to reduce water use and raise awareness of water resource conservation throughout the supply chain.

Living in Harmony with Nature

In order to achieve nature-positive results, we will implement activities to reduce negative impacts on biodiversity and increase positive impacts in the areas of our corporate activities, including supply chains, in response to the 2030 International Biodiversity Targets 15 of the Kunming-Montreal Framework.

Environmental Action Plan

	Customers and Society	Fujitsu and Supply Chain		
	Business Field	Upstream Business	Fujitsu's Business Areas	Downstream Business
				
Climate Change	Development and provision of solutions that contribute to SX	Suppliers' GHG reduction (Well Below 2 °C target)	<ul style="list-style-type: none"> Reduction of GHG emissions at business sites (1.5 °C target) Increase the use ratio of renewable energy 	By reducing power consumption during product use Reduction of GHG emissions
Resource Circulation		Enhancing suppliers' awareness of water resource conservation	Reduction of water consumption	To product resource conservation and resource recycling Improving resource efficiency
Living in Harmony with Nature		Reducing negative impacts of corporate activities on biodiversity		

Environmental Action Plan Targets

Goal			Base Line	Targets for FY2025	
Customers and Society			—	Deliver SX offerings to customers	
Fujitsu and Supply Chain	Climate Change (*2)	Scope 1,2	Reduce GHG emissions at business sites by half of the base year by the end of FY2025 <ul style="list-style-type: none"> Increase use ratio of renewable energy to 50% or more by 2025 	FY 2020	Reduction of at least 50%
		Scope 3 (Category 11)	Reduce CO ₂ emissions from power consumption during product use by 12.5% or more	FY 2020	Reduction of at least 12.5%
		Scope 3	Reducing GHG emissions in the supply chain	—	Goal setting completed

	(Category 1)	<ul style="list-style-type: none"> Major business partners should set emission reduction targets (equivalent to SBT Well Below 2 °C target). Collection of GHG reduction data, construction and deployment of mechanisms 		
	Resource Circulation	Development of products and services that contribute to a circular economy business model	—	CE Business Products Service Development
		Reduce water consumption by 57,000 m ³ or more by implementing water reduction measures	—	57,000 m ³ or more
		Strengthening awareness of water resource conservation in the upstream supply chain <ul style="list-style-type: none"> Requesting our major suppliers to make efforts to raise their awareness of the importance of water resources 	—	Request Completed
	Living in Harmony with Nature	Reduce negative impacts on biodiversity in the areas of corporate activities, including supply chains, by at least 12.5% In addition, promote activities that increase positive impacts on biodiversity	FY 2020	Reduction of 12.5% or more

*2 Climate Change: Scope 1, 2 and 3. adjusted for acquisitions and divestitures

Fujitsu Group Environmental Action Plan (Stage X)

The Fujitsu Group had specified targets that address the three global societal challenges of climate change, resource circulation and living in harmony with nature (conservation of biodiversity). As we undertake workstyle reforms and restructure our business operations, we will focus on these targets over the two-year period from FY 2021 to FY 2022 by working to minimize negative environmental impacts in the supply chain.

We report the results below.

Targets (to be achieved by FY2022)		FY2022 results
Climate Change		
1	Reduce greenhouse gas (GHG) emissions from business sites each year by 4.2% or more, compared with the base year of FY2013	10.5% reduction (47.5% reduction compared to baseline year) (*1)
2	Improve PUE (Power Usage Effectiveness) of our data centers by 3%, compared with FY2017	PUE 1.57 - Improvement of 1.2%
3	Increase renewable energy usage to 16% of total electricity	30.0%
4	Reduce CO ₂ emissions due to power consumption during product usage by 17% or more, compared with FY2013	Reduced by 25%
5	Drive activities to reduce CO ₂ emissions in the upstream supply chain.	Requested that secondary suppliers (over 61,000 companies) engaged in activities to reduce emissions through primary suppliers of the Fujitsu Group (676 companies)
Resource Circulation		
6	Promote eco design for resource saving and circulation and increase resource efficiency of newly developed products by 10% or more, compared with FY2019	Improved by 11.2%
7	Reduce water usage by 30,000 m ³ or more by implementing water resource conservation measures	Water consumption was reduced 31,000 m ³ (target for FY 2022: 19,000 m ³)
8	Reinforce awareness of the need to conserve water resources in the upstream supply chain	Requested that 676 of the Fujitsu Group's primary suppliers engage in activities to conserve water
Living in Harmony with Nature (Conservation of Biodiversity)		
9	Visualize and reduce the impact of corporate activities on ecosystems and on biodiversity	Establishment of a calculation method that uses Ecological Footprint (EF) as the indicator for visualizing the impact of corporate activities on biodiversity

*1 Reduction rate based on market standards

Environmental Action Plan

Climate Change

External Trends

Accelerated Controls on GHG Emissions are Required for Carbon Neutrality

The COP 21 Paris Agreement, adopted in December 2015, set out a long-term, shared worldwide goal of limiting the average global temperature increase to considerably less than 2°C and preferably 1.5°C over pre-Industrial Revolution temperatures, as well as the goal of carbon neutrality (net zero emissions) by the second half of this century (2050). Correspondingly, moves aimed at achieving a carbon neutral society have been accelerating on a global scale. Subsequently, the COP26 Glasgow Accords strengthened the 1.5°C target adopted under the Paris Agreement and shifted the standard for global climate change measures to the 1.5°C target.

Given this impetus, efforts towards achieving a carbon-neutral society are accelerating on a global scale.

The Task Force on Climate-related Financial Disclosures (TCFD) was established in December 2015 by the Financial Stability Board, which includes participants representing central banks, financial regulatory authorities and finance ministries from major countries. The TCFD requests companies to use multiple climate scenarios to evaluate the climate-related risks and opportunities to their business and to assess and disclose the financial impact. Various international initiatives have also been launched, such as the Science Based Targets initiative (SBTi), which calls for corporate emissions reduction goals designed to meet the 1.5°C target, and RE100, which calls for companies to source 100% of the electricity they use from renewable energy. Furthermore, CDP (*1), which runs the global disclosure system for investment that takes into account Environmental, Social and Governance (ESG) factors, requests that companies reduce GHG emissions by at least 2.1% year-on-year through voluntary efforts.

(*1) CDP: An international not-for-profit organization providing the only global system for companies and cities to measure, disclose, manage, and share vital environmental information. CDP works with major institutional investors around the world to encourage companies to disclose their impact on the environment and natural resources and to adopt measures that mitigate the impact.

Fujitsu Group Position

GHG Emissions Reductions are a Critical Issue for the Fujitsu Group

The Fujitsu Group, as an entity with global operations, is fully aware that climate change is a serious worldwide issue that spans national and regional boundaries. For example, disasters triggered by climate change can disrupt procurement, logistics and energy supply networks, which in turn interrupts the process of supplying materials and energy to business sites. Regulations governing GHG emissions have an impact on the development and production of products and services, and any delays in responding to requirements can lead to lost business opportunities.

Since launching the Fujitsu Group Environmental Action Plan, we have treated the reduction of GHG emissions as a critical issue and worked to achieve the defined targets.

Most of the GHG emissions generated by the Fujitsu Group derive from purchased electricity, not from the combustion of oil or gas. Advances in 5G technology will lead to the expansion of cloud computing, IoT and mobile communications, thereby spurring increased power consumption in data centers, and this growing trend is expected to continue. We are therefore focusing on reducing power consumption by conducting energy conservation audits and regular power usage checks in our data centers, as well as in our factories and production lines in Japan and elsewhere.

Approach under the Fujitsu Group Environmental Action Plan (Stage XI)

Strengthen Efforts to Achieve Carbon Neutrality

In May 2017, the Fujitsu Group formulated the FUJITSU Climate and Energy Vision, its medium- to long-term environmental vision. In August of the same year, the company obtained SBT certification for 2°C-aligned GHG emissions reduction targets. The SBTi aims to significantly reduce greenhouse gases over the medium to long term by encouraging companies to set voluntary GHG emissions reduction targets based on scientific knowledge compiled by organizations such as the IPCC (*2). Given the accelerating global trend toward carbon neutrality, the Fujitsu Group reviewed its position and revised its target to reduce GHG emissions from business sites in FY2030 from 33% to 71.4% below FY2013 levels. On April 15, 2021, this revised figure was successfully validated as a 1.5°C-aligned target by SBTi. To further accelerate our carbon neutrality as a global company, including our supply chains, we committed to expanding our use of renewable energy and achieving net zero GHG emissions in our business activities by FY2030 and throughout our value chain (scope 1, 2 and 3 emissions) by FY2040.

In June 2023, our target of net-zero by FY2040 obtained "Net-Zero Target certification" under the SBTi standard. Working backwards from our future GHG emissions reduction targets, we have formulated our Fujitsu Group Environmental Action Plan (Stage XI) as the implementation plans for our environmental targets between FY2023 and FY2025. To achieve carbon neutrality, we are aiming for at least 50% of the energy used by our businesses to be from renewable sources by FY2025, with a target of 100% by FY2030. At the same time, we are working towards achieving net-zero GHG emissions across the entire value chain through measures such as identifying the environmental impacts of our suppliers and promoting emissions reductions, and by further reducing energy consumption by Fujitsu products.

From April 1, 2021, the largest facility in the Fujitsu Group, the Kawasaki Factory, switched over to 100% renewable energy for power consumed. As such, it serves as a flagship model for the Fujitsu Group as we focus on the future adoption of renewable energy in Japan. This initiative accounts for approximately 5% of the electricity used by the Fujitsu Group in Japan. In April 2022, Fujitsu Australia signed the Fujitsu Group's largest ever Power Purchase Agreement (PPA) for renewable energy, which will ensure that around 40% of Fujitsu Australia's annual power consumption comes from renewable sources.

In addition, Fujitsu intends to continue boosting purchases of green energy and renewable energy certificates, after considering relevant regional characteristics and the economic feasibility, and to implement more on-site renewable energy capacity. Use of the Fujitsu Group's leading-edge technological expertise in areas such as blockchain technology will also contribute to the spread and expansion of renewable energy.

(*2) Intergovernmental Panel on Climate Change (IPCC): An organization established in 1988 by the [United Nations Environment Programme \(PDF\)](#) (UNEP) and the [World Meteorological Organization \(PDF\)](#) (WMO) with the aim of providing comprehensive assessments of human-induced climate change and its impacts, together with adaptation and amelioration measures from scientific, technological and socio-economic perspectives.

(*3) Net zero: The elimination of greenhouse-gas emissions through emissions reductions of at least 90% by the target year and removing the remaining 10% or less through measures such as reforestation or Direct Air Capture (DAC) of CO₂ in the atmosphere.

RELATED LINKS

Actions and targets related to climate change initiatives under the Fujitsu Group Environmental Action Plan (Stage XI)

- [Reducing Greenhouse Gas \(GHG\) Emissions at Our Business Sites](#)
- [Improve Power Usage Effectiveness \(PUE\) at Our Data Centers](#)
- [Expand the Use of Renewable Energy](#)

Environmental Action Plan

Reducing Greenhouse Gas (GHG) Emissions at Our Business Sites

Our Approach

The Fujitsu Group considers the prevention of global warming an important issue. We have, therefore, formulated our medium- to long-term environmental vision, the Fujitsu Climate and Energy Vision, and aim to eliminate all CO₂ emissions from our business activities by 2050.

Among GHGs, our business sites (plants and offices, as well as datacenters) primarily emit CO₂ when energy (electricity, fuel oil, gas) is used, and perfluorocarbons (PFCs), hydrofluorocarbons (HFCs), sulfur hexafluoride (SF₆) during the manufacturing processes and PFCs and HFCs from fluorocarbon leakage. We will set reduction targets in addition to complying with the relevant laws, and we are striving to reduce and control the volume of use and emission of these gases.

Reducing CO₂ Emitted During Energy Consumption

About 99% of the Fujitsu Group's total GHG emissions arise from CO₂ emissions due to energy consumption. Therefore, we continuously promote the following energy-saving measures to reduce CO₂ emissions.

- Appropriate operation of equipment, improvement in management, and energy-saving measures focused on motive-power facilities (introduction of free cooling, inverters and energy saving equipment, fuel conversion, etc.)
- Increasing efficiency by reviewing the manufacturing process (innovations in production, development of green production technology)
- Maintaining appropriate room temperature for office air conditioning, saving electricity used in lighting and office automation equipment, and switching to LED lighting
- Measuring energy consumption for visualization and promoting use of the data so collected

Reducing Emission of GHGs Other Than CO₂

As for GHGs other than CO₂, the Fujitsu Group mainly uses perfluorocarbons (PFCs), hydrofluorocarbons (HFCs) and sulfur hexafluoride (SF₆) at the manufacturing divisions. We are taking continuous steps to switch to gases with lower global warming potential (GWP) and install equipment to remove harmful gases in our new and existing production lines. We also carry out inspections and maintenance to comply with relevant laws regarding PFCs and HFCs emissions resulting from fluorocarbon leaks from air conditioning equipment.

FY 2022 Performance

Targets under the Fujitsu Group Environmental Action Plan (Stage X)	FY2022 result
Reduce GHG emissions of our business sites by 4.2% or more every year (compared to FY 2013) (*1)	10.5% reduction (47.5% reduction compared to baseline year) (*2)

(*1) Target organizations: Business sites owned by Fujitsu and the Fujitsu Group. Includes major data centers.

(*2) Reduction rate based on market standards

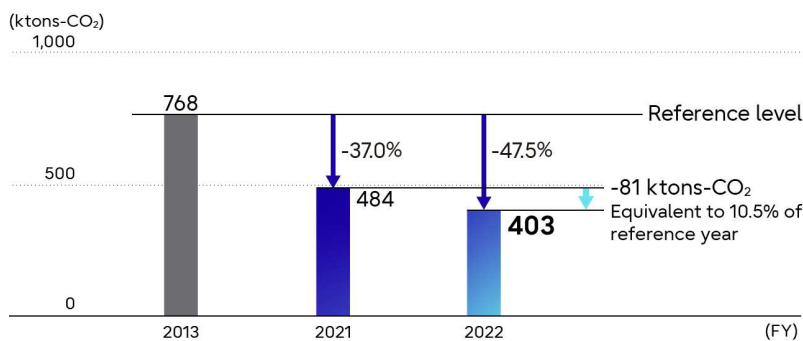
Promoting Reduction in CO₂ Emitted During Energy Consumption

We continue to invest in energy-saving equipment (introduction and upgrade of BAT (*3) equipment, mainly for air conditioning and lighting) and ensure their appropriate operation at the facilities at all business sites. We are also streamlining our production processes, saving electricity used for air conditioning, lighting and automation in offices, making energy consumption visible, and leveraging measurement data.

For instance, as for investment in lighting equipment, we have continued to adopt high efficiency LED lighting and lowered CO₂ emissions by 1,423 tons. Moreover, we also improved facility operations (7,532 tons-CO₂) by reviewing air conditioner operating conditions, such as switching to higher efficiency equipment and controlling the number of units, and suspending operation of pumps and air conditioning devices. Through our own efforts, we carried out measures to reduce our emissions by roughly 13 ktons-CO₂ (2.6% in comparison to last fiscal year).

As a result of these initiatives, we reduced our GHG emissions according to market standards in keeping with SBT, which is an objective in the Environmental Action Plan (Stage X), by 10.5%pt compared to the baseline year (47.5% reduction in comparison to our emissions in FY 2013).

Environmental Action Plan (Stage X) GHG Emissions Reductions

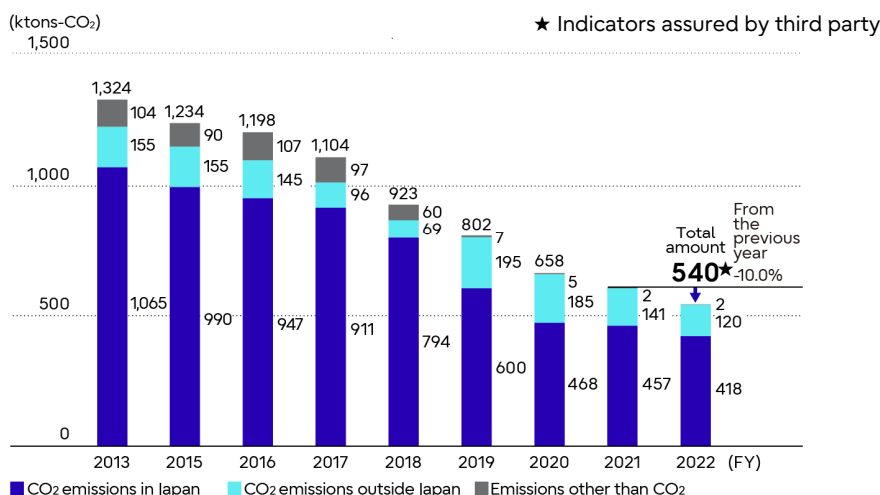


- (*3) BAT (Best Available Technologies): Usable state-of-the-art technologies to reduce GHGs.
- (*4) Environmental Action Plan (Stage X) performance values for the reference year (FY 2013) and FY 2022 are the total values for business sites targeted by the Environmental Action Plan (Stage X).
- (*5) CO₂ conversion factors of purchased electricity are market standards for both the reference year (FY 2013) and FY 2022 performance values.

Total Emissions of 540ktons-CO₂ ★ in FY 2022

Our total GHG emissions in FY 2022 were 540 ktons-CO₂ (output level per sales amount: 14.5 tons-CO₂/100 million yen). They decreased by 13.1% in comparison to FY 2021.

Trends in Total Greenhouse Gas Emissions



- (*6) CO₂ emissions in Japan and overseas: The CO₂ conversion factor for purchased electric power in performance reports has been calculated with a fixed value of:
 - In Japan - 0.570 tons-CO₂/MWh from FY 2013 to FY 2015, 0.534 tons-CO₂/MWh for FY 2016, 0.518 tons-CO₂/MWh for FY 2017, 0.497 tons-CO₂/MWh for FY 2018, 0.461 tons-CO₂/MWh for 2019, 0.444 tons-CO₂/MWh for FY 2020, and 0.436 tons-CO₂/MWh for FY 2022
 - Overseas – Same coefficients as those used in Japan from FY 2013 to FY 2018, and the latest IEA values (by country) for the relevant FY from FY 2019 onwards
- (*7) Emissions other than CO₂: These are converted to equivalent amounts of CO₂ using the global warming potential (GWP) for each gas.

Improve Power Usage Effectiveness (PUE) at Our Data Centers

Our Approach

Energy consumption in data centers is on the rise, due to factors such as the spread of cloud computing, and society is paying greater attention to the environmental performance of data centers.

Data centers account for approximately 40% of the CO₂ emissions (FY 2022) for each business in the Fujitsu Group. Since data center CO₂ emissions are expected to continue increasing along with the expansion of digitalization, the Fujitsu Group has a social responsibility to promote environmentally friendly data centers. At the same time, in terms of enhancing our business infrastructure, it has also become an important topic that we should work on from a long-term perspective.

FY 2022 Performance

Targets under the Fujitsu Group Environmental Action Plan (Stage X)	FY 2022 result
Improve PUE (*1) at data centers by 3% or more. (Compared to FY 2017)	PUE 1.57 - Improvement of 1.2%

(*1) PUE (Power Usage Effectiveness):

An index for power usage effectiveness at data centers. Expresses overall power consumption at data centers as a value divided by the power consumption of servers and other ICT devices. The closer the number is to 1.0, the greater the efficiency.

Promoting Activities to Achieve Our Goals

We are moving forward with activities to improve PUE at data centers in Japan and around the world, based on the Fujitsu Group Environmental Action Plan. In 2022, as with 2021, we continued to expand operation-side measures, including updating air conditioning equipment and striking the right balance by adjusting heat amounts and cooling capacity for IT equipment. We made steady progress up to 2021 and reached our targets, but in summer 2022 outside temperatures were warmer than FY 2021 globally (including some regions in Europe rising by 4-degrees Celsius) and as a result, we were unable to meet our targets. However, we have made a more than 1% improvement from the base year and continuous improvement activities are still underway. In addition to energy conservation activities, we expanded our use of renewable energy with the goal of carbon neutrality. This included switching our FJcloud service for domestic data centers to 100% renewable energy, while Fujitsu Australia concluded the largest power purchase agreement (PPA) among the entire Group.

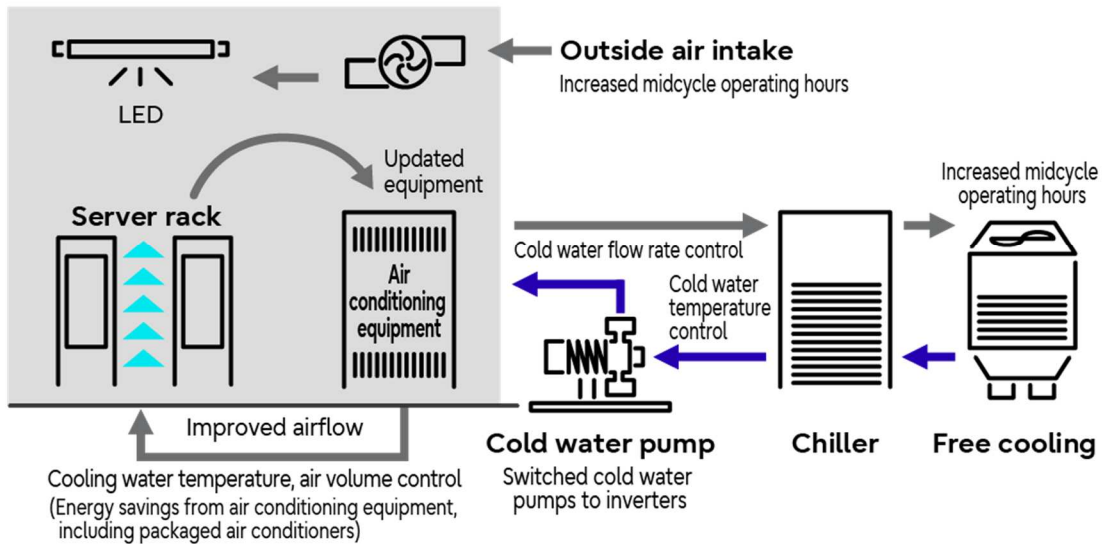
PUE values and calculation methods

PUE Value	PUE calculation method, other
Range: 1.31 to 2.11 No. of data centers: 23	<ul style="list-style-type: none"> • Apply the Green Grid • Work to implement improvements using DCMM • DCMM: Data Center Maturity Model

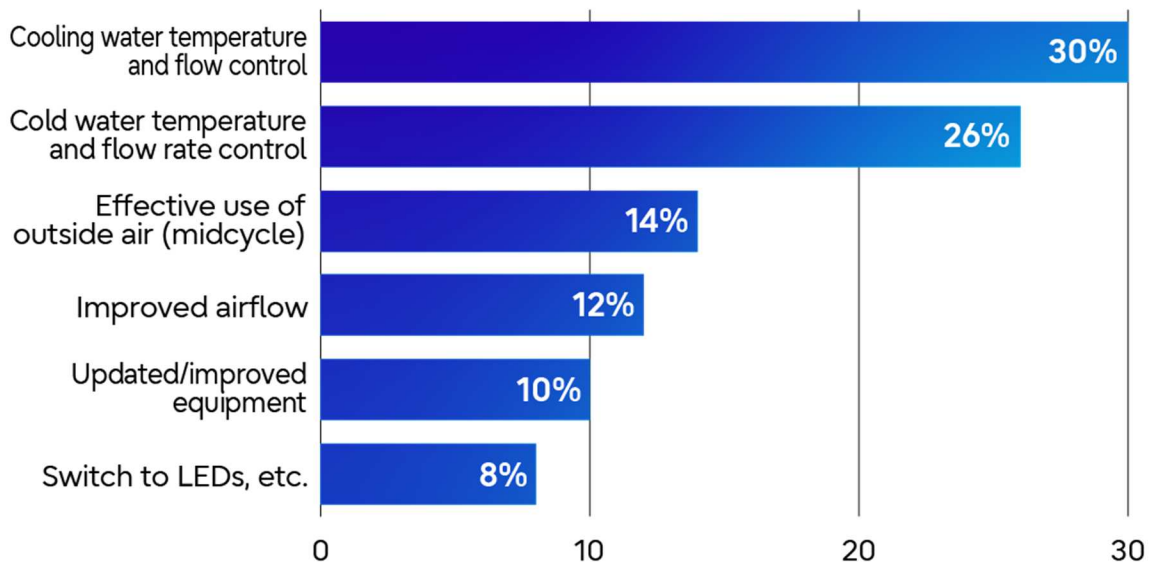
Examples of Initiatives in FY 2022

Reducing Air Conditioning Power We tuned our air conditioning based on IT power consumption (heat generation), and expanded the target floors through measures such as adjusting fan speeds and air conditioning temperature, along with lessening the cold water temperature and adjusting the number of cooling equipment in operation. Furthermore, at data centers with air conditioning using outside air or free cooling, we worked to increase midcycle operating hours and reduce air conditioning power. Additionally, at certain data centers, we are achieving positive results in energy conservation through investments in facility improvements, such as updating air conditioning equipment and switching cold water pumps to inverters.

PUE Improvement Status



Implementation Status of PUE Improvement Measures (50 in total)



Promoting Improvements through Better Information Sharing with Overseas Data Centers

In an effort to further enhance PUE improvement activities, we are enhancing communication through information sharing improvement measures know-how gained at each data center and the progress of improvements through regular remote meetings in collaboration with PUE improvement activities of overseas data centers. We are now sharing related information on internal portal sites and visualizing the progress of efforts, with the aim of making these activities progress more smoothly in the future.

Environmental Action Plan

Expand the Use of Renewable Energy

Our Approach

The popularization and widespread use of renewable energy is becoming increasingly necessary as a way of addressing global warming, securing stable energy supplies through the diversification of our energy sources, and as an energy-based foundation for economic growth.

The Fujitsu Group has established an environmental vision aimed at realizing a decarbonized society. The main pillars for this vision are a dedication to energy conservation, and the active implementation of renewable energy. To achieve this vision, we have set quantitative targets under the Environmental Action Plan, and are actively promoting the introduction and installation of solar power generation equipment at our business sites, as well as the purchase, use, and expansion of green power (electric power generated through 100% renewable energy).

FY 2022 Performance

★ Indicators assured by third party

Targets under the Fujitsu Group Environmental Action Plan (Stage X)	FY2022 result
Expand the rate of renewable energy used to 16%	30.0%★

(*1) Target organizations: Business sites owned by Fujitsu and the Fujitsu Group. Includes major data centers

(*2) Calculation Standard: 5 -3 -4 -5

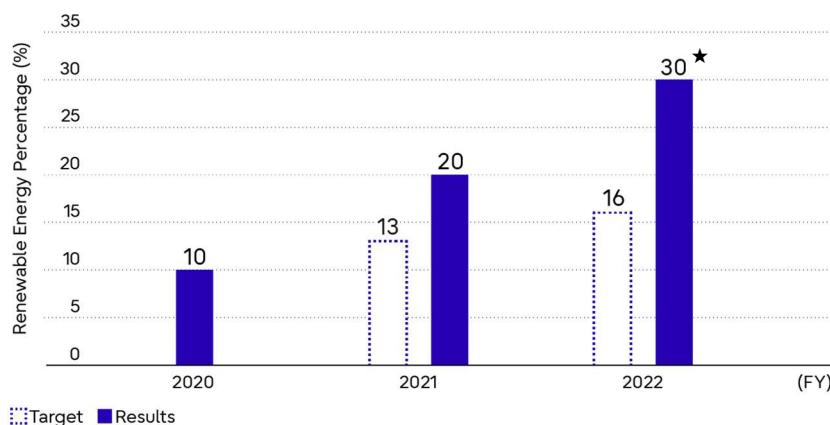
Refer to [Environmental Performance Data Calculation Standards](#) for details

Environmental Action Plan (Stage X) Initiatives

With the aim of achieving the Fujitsu Group’s medium-term environmental goal of “using more than 40% renewable energy in FY 2030,” we set a target under the Fujitsu Group Environmental Action Plan (Stage X) of expanding the rate of renewable energy we use to 16%. In FY 2022, through the purchase of green power and power generation through solar panels, our rate of renewable energy use grew to 30.0%★.

We will continue to work toward the implementation of renewable energy in both our domestic and overseas business offices, in order to further our purchase and usage of renewable energy.

Environmental Action Plan (Stage X) Renewable Energy Percentage



Renewable Energy Procurement Principle

Mandatory Requirement

- Renewable energy that can be reported through RE 100 activities
 - Power sources are Solar, Wind-power, Geothermal, Biogas, Small-hydro etc.
 - Environmental value (renewable attribute) can be pursued and verified
 - No double counting of environmental value
- Ex.) Amortization of environmental value of renewable energy, to be executed through the system of public agency

Recommended Requirement

- The electric power, in which power consumption to be combined with environmental value
 - The electric power, in which grid power and environmental value certification to be one set (The renewable energy to be generated in the same grid)
 - Power balancing to be managed. In time of emergence, minimum gap of power consumption and environmental value to be generated (within one year etc.)
- To select the renewable energy, by which we can contribute to local society
 - For example, by selecting the renewable energy in the same area as grid consumption, we can make "Local generation for local consumption" possible.
 - Or to support the power generation company which makes effort to enlarge renewable energy power
- To procure the power from relatively new sites, in order to contribute the enlargement of renewable energy (Additionality)
 - To promote new project conjuncture, then to procure the power from it, we can contribute to increase the capacity of renewable energy of whole society
- To procure from the power generation site which was developed and constructed with the agreement of local society
 - To avoid making significant impact to the environment or society in which the power generation site is located

Examples of Initiatives in FY 2022

Renewable Energy Initiative in Australia

Fujitsu Australia signed a power purchase agreement to procure renewable energy through the Sapphire Wind Farm operated by CWP Renewables. Beginning in June 2022, Fujitsu Australia has covered approximately 40% of its data center electricity with renewable sources. This equates to around 30% of the company's total annual electricity consumption, and offsets approximately 30,000 tons of its annual greenhouse gas emissions.

- [Fujitsu Australia signs its first power purchase agreement in a key step towards decarbonising its operations and providing lower-emissions services](#)
- [Case studies](#)

Environmental Action Plan

Reduction of CO₂ Emissions by Reducing Power Consumption When Using Products

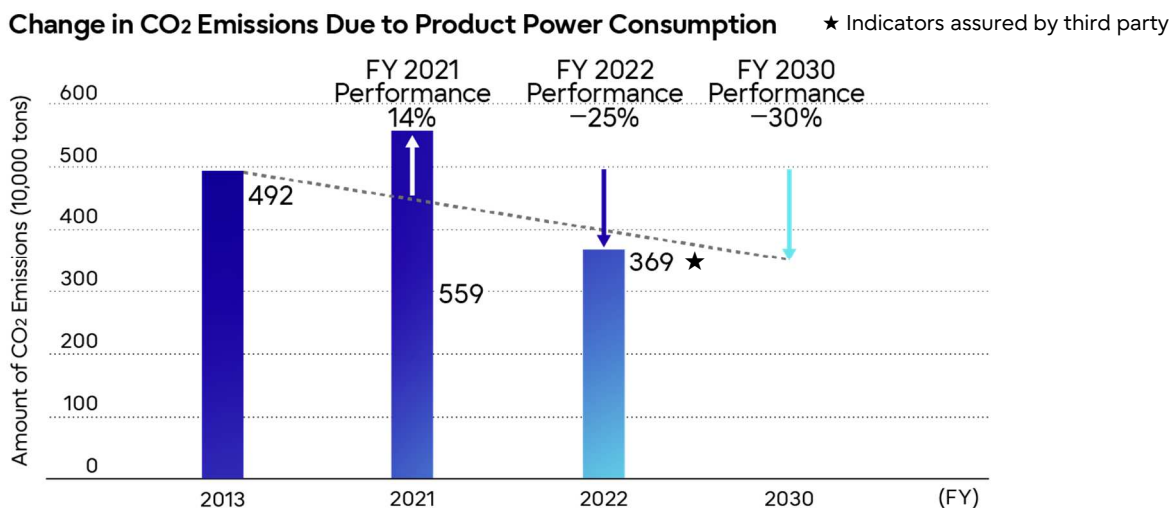
Our Approach

As ICT grows more and more common, we expect there to be an increase in energy demand in proportion to the higher performance and higher-density integration of servers and other ICT products. Various countries and regions are also expanding their energy-related regulations for ICT products, and energy efficiency is taking on increasing social importance as a factor in energy label conformance and green procurement requirements.

Here at the Fujitsu Group, we believe that we should work to improve the energy performance of our products during their use, in order to reduce GHG emissions. As such, we will actively implement energy-saving technologies and continue working to further improve the energy efficiency of products. Through these efforts, we will work to promote the development of products that contribute to reduced power consumption when in use.

FY 2022 Performance

Targets under the Fujitsu Group Environmental Action Plan (Stage X)	FY2022 result
Reduce CO ₂ emissions due to product power consumption by 17% or more in comparison to FY 2013.	Reduced by 25%



Fujitsu Group Environmental Action Plan (Stage X) Initiatives

Based on the Fujitsu Group's medium-term environmental goal of "reducing CO₂ emissions due to product power consumption in FY 2030 by 30% or more in comparison to FY 2013," we set a target in the Fujitsu Group Environmental Action Plan (Stage X) to reduce CO₂ emissions due to product power consumption by 17% or more in comparison to FY 2013 in FY 2022, as a transitional year. To achieve this target, each business unit goals to improve the energy efficiency of products that were expected to be developed in FY 2021 and FY 2022, then worked to meet them. Applications of energy-saving technologies include new, high-efficiency microprocessors and power supplies, energy-saving displays, optimized energy-saving controls, and the strengthening of power management features. In addition to these, we are actively pushing for the aggregation of LSIs, reductions in the numbers of components, and the implementation of eco-friendly devices.

Attained a 25% Reduction in CO₂ Emissions in Comparison to FY 2013

In FY 2022, as a result of applying and expanding energy-saving technologies in our servers, storage, PCs, and network devices, we were able to attain a 25% reduction in CO₂ emissions in comparison to FY 2013.

Working Toward Our Targets

In order to achieve the Fujitsu Group's medium-term environmental goal, each unit will work to further develop products with improved energy efficiency. We will also implement advanced energy-saving technologies and expand their application to our products, as part of our cross-Group policy to improve energy efficiency.

Looking toward the future, we aim to push the development of advanced eco-friendly devices, which will contribute to revolutionary improvements in energy efficiency, and aim for the products to be applied at an early stage.

Initiatives in FY 2022

FACT-X functions as a new ATM that conserves energy

FACT-X is a next-generation ATM for a cashless era. It works as a bank teller in addition to serving as a full-service ATM. Developed under the concept of "accessible to all," the ATM has many thoughtful features with all users in mind, including simple operation and accessibility, security design, and ease of use for those unfamiliar with ATMs or in a wheelchair. We also provide operational support services to the companies that operate ATMs, including remote functions and remote maintenance services. In addition, we will continue to provide functions that meet customer needs, including features to reduce teller operations.

In terms of environmental considerations, we have revised the function and parts of the new model to include complete transition from paper journals to electronic journals and adoption of SSD, in addition to offering the Super Eco Mode which turns the power off when no users are present in existing models. This update reduced power consumption by 15% when in use compared to conventional models*. (*Compared to FACT-V X200) We strive to help customers achieve sustainability and transformation through enhanced customer services and provision of channel reform through FACT-X as a new contact point.



FACT-X

> [Case studies](#)

Environmental Action Plan

Activities to Reduce CO₂ Emissions in the Upstream Portion of the Supply Chain

Our Approach

In addition to reducing our own emissions, the Fujitsu Group has also been requesting, as part of green procurement, that its suppliers engage in activities to reduce their own CO₂ emissions in order to help contain global warming. As a result, all of our primary suppliers have undertaken efforts to reduce their CO₂ emissions. Starting in FY 2016, we have also been expanding these efforts further upstream in the supply chain by requesting that our suppliers include their own suppliers (secondary suppliers from the perspective of the Fujitsu Group) in these activities.

We have participated in the CDP Supply Chain program since FY 2018, in parallel with the above-mentioned activities. Based on our international environmental research activities, we are taking a more in-depth look at the activities of our primary suppliers to reduce CO₂ emissions and conserve water resources, and considering the issues and our policies.

Moreover, as a new initiative, we are asking our main suppliers to establish a CO₂ reduction target based on the international standard of Science Based Targets (SBT). Starting in FY 2022, we have also expanded the target suppliers for CO₂ emissions reduction to include those in the services industry in addition to the existing category of parts manufacturing as we strive to further reduce global warming.

The Group hosts seminars on setting reduction targets based on SBT. In FY 2022, about 90% of target suppliers attended the seminar.

In addition, we also host webinars on how to set targets and share FAQ. We support our suppliers' CO₂ reduction efforts through the provision of a simple tool for suppliers to visualize CO₂ emissions (Scope 1 and 2) of their own company and determine the appropriateness of their SBT.

We expect that having the supply chain as a whole work toward reducing emissions can produce even greater reduction effects (synergies), while also expanding the network of these activities through the supply chain to cover an even wider area spreading beyond national boundaries. Through efforts such as these, the Fujitsu Group hopes to help create a carbon-free society for the future and a sustainable water environment.

FY 2022 Performance

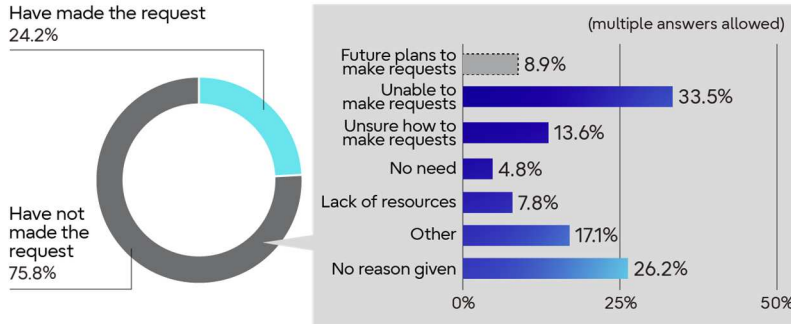
Targets Under the Fujitsu Group Environmental Action Plan (Stage X)	FY2022 result
Reduction of CO ₂ Emissions: Drive Activities to Reduce CO ₂ Emissions in the Supply Chain	Requested that secondary suppliers (over 61,000 companies) engaged in activities to reduce emissions through primary suppliers of the Fujitsu Group (676 companies)

Reduction of CO₂ Emissions: Requesting and Supporting the Expansion of Activities to Secondary Suppliers

The Fujitsu Group has requested that its primary suppliers, who account for the top 80% of the Group's procurement, to engage in activities to reduce their CO₂ emissions, and to expand these efforts to also include their own suppliers (the Fujitsu Group's secondary suppliers). We also conducted our own environmental survey to ascertain the status of activities by these suppliers. We then provided suppliers who responded to the survey with feedback in the form of a report that analyzed survey responses as a reference for their future activities, and we also requested that they further promote these activities and expand them to include their own suppliers.

As of the end of FY 2022, 24.2% (150 suppliers) responded that they had requested their own suppliers to engage in emissions reduction activities. Over 61,000 secondary suppliers have been asked to engage in emissions reduction activities, and this should substantially impact awareness.

Status of primary suppliers' request that secondary suppliers engage in activities to reduce their CO₂ emissions



*Non-responses and responses from primary suppliers with no secondary suppliers were excluded

Offering Guidelines for Activities for Reducing CO₂ Emissions

The Fujitsu Group created original explanatory materials to facilitate the spread of activities for reducing CO₂ emissions throughout the entire supply chain, and since the end of November 2017, we have made the materials available on the company website and we have provided them to suppliers. The purpose of these materials was not only to give suppliers a greater understanding of the importance of these activities taking place in the supply chain, but also to serve as something they could use to request and assist such activities amongst their own suppliers. To fulfill our responsibilities as a global enterprise, the Fujitsu Group will continue to think about what must be done to contain global warming and will continue to take action.

“Guideline for activities for reducing CO₂ emissions” can be downloaded from the following sites.

- > [Japan](#)
- > [Global](#)

Informational materials for business partners

2. Practical activities: Procedure for target setting

1. Setting of Activity contents

- 1) Extract feasible activities in-house.
- 2) Decide more suitable activities from the extractions.

2. Selection of Progress Indexes (Numerical data)

Select CO₂ emissions data, or data leading to CO₂ emissions directly.
(e.g. p. 2. Practical activities: Examples for activity contents and progress indexes)

* If it is (e.g. C) Select activities to be conducted and progress indexes to be controlled.

Activity items	Activity contents	Progress indexes
Saving energy (reducing lighting power consumption)	Switch off unnecessary lighting/ install LED	Implementation rate/Installation rate /Energy-saving rate
	Light off during break times	Time for lights off/Implementation rate
	Stop of servers on holidays	Stopping time/Stopping rate
Saving energy (reducing common-use facility power consumption)	Reduce overtime hours/ specify days on which all employees leave work at the same time	Implementation rate per department
	Utility time limits on reception/ conference room	Utility time/Energy-saving rate
Saving energy (reducing air-conditioning power consumption)	Appropriate temperature setting of air-conditioning systems	Implementation rate/Implementation period
	Installation of rooftop greening/ wall greening	Implementation rate/Greening area per building
Saving energy (promoting of renewable energy)	Installation of green electricity systems	Installation rate
Saving energy (innovative changes of lifestyles)	Encouragement of bicycle commuting of employees	Number of employees taking part in the initiative/Implementation rate
	Promotion of eco-driving	Implementation rate/ELV installation rate
Preserving biodiversity (preservation of CO ₂ -absorbing resources)	Implementation of forest-preservation activities	Number of activities/Number of participants/Forestation land area/Number of trees planted
Conservation of paper resources	Promotion of paperless	Reduction volume/Implementation rate
Promotion of environmental awareness	Raise awareness by in-house education	Number of attendance/Attendance rate/ Test pass rate

3. Setting of targets

* If it is

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Environmental Action Plan

Resource Circulation

External Trends

Strengthening Global Resource Circulation

Goal 12 of the Sustainable Development Goals (SDGs), adopted by the United Nations in September 2015, is 'Responsible consumption and production'. The actions that organizations are urged to take in order to meet this goal include the efficient use of natural resources, the appropriate management of chemical substances and waste products throughout the entire product life cycle, and significant reductions in the volume of pollutants emitted into the air, water, and soil. In addition, in March 2022, the European Commission announced the first package of measures in its Sustainable Products Initiative (SPI), which is pivotal to the new Circular Economy Action Plan formulated in March 2020. Following this, in November 2022 the second package of measures was released with revised rules on packaging and packaging waste as well as a plastic circulation policy framework with directives for bio-based, biodegradable, and compostable plastics. In March 2023, further proposals were adopted on green claims and product sustainability. Regarding the series of sustainable product standardization packages for the EU market in these announcements, companies need to closely monitor future trends.

The Problem of Plastic Waste

According to a new report by the Organization for Economic Co-operation and Development (OECD), the volume of plastic waste generated globally is forecast to triple by 2060 from its 2019 level of 353 million tons. While the resumed fifth session of the United Nations Environment Assembly (UNEA-5.2) held in February 2022 acknowledged the usefulness of plastics, it also noted that the problem of plastic pollution is global in scale and includes the contamination of our oceans. It was decided that an intergovernmental negotiating committee would be established in the second half of 2022 with the task of formulating a legally binding global agreement to be finalized by the end of 2024. In view of these developments, companies need to implement plastic resource circulation throughout the life cycles of their products.

The Fujitsu Group's Position

Aiming for Resource Circulation

The Fujitsu Group has a long-standing commitment to the "three R's" (reduce, reuse, recycle) relating to plastics and other resources. We are conducting ongoing discussions around resource circulation for our products, including reuse, recycling and the use of recycled materials, particularly in view of the acceleration of global action and the abovementioned announcement of Europe's new Circular Economy Action Plan in March 2020. We are continuing to promote the use of recycled plastics in our IT products, switching from plastic to cardboard packaging materials, and reducing the number of components used in our products while making them smaller, thinner, and lighter. Another focus for Fujitsu is the recycling of resources from used IT products and from waste generated at business sites. One of the targets we have been working towards in our Environmental Action Plan is the reuse of resources in used IT products. Having reached a resource reuse rate of over 90% for IT products used in business, we are now continuing our efforts by focusing on our management targets. In light of the urgent need to address the problem of plastic waste, as outlined above, we are promoting initiatives that target packaging materials and other plastic waste. Changes in our business model are also resulting in reduced volumes of waste as we bolster our efforts to further limit waste and recycle resources in order to make a stronger contribution to a society oriented toward resource circulation.

Responses to the Plastic Resource Circulation Act

In response to environmental changes, both in Japan and overseas, involving the waste from products that use plastic, there is increasing demand for resource circulation of plastic products. This ranges from limiting the use of plastic products through to having local and municipal governments recycle plastics for use in other products, and developing regimes that will promote voluntary plastics collection and recycling by businesses. In line with this trend, Japan promulgated the “Plastic Resource Circulation Act” in June 2021. This Act targets the plastics used in a wide range of products and promotes measures to recycle plastic resources in each stage of a product’s life, from design right through to the treatment of plastic waste (3R + Renewable).

Fujitsu is designated as a “high-volume waste emitter” under the legislation, and as such, has set targets for recycling and limiting the production of plastic waste and is promoting activities in line with those targets.

Target: Promotion of zero-emissions activities for plastic waste and greater use of returnable plastics

FY2022 plastic waste volume: 1,347 tons

RELATED LINKS

- [Improving the Resource Efficiency and Resource Circulation of Products and Product Recycling](#)
- [Reducing the Amount of Water Used](#)

Improving the Resource Efficiency and Resource Circulation of Products and Product Recycling

Improving the Resource Efficiency and Resource Circulation of Products

Our Approach

As risks that threaten the sustainability of society and companies continue to rise, such as environmental destruction due to resource depletion and excessive mining, major fluctuations in resource costs around the world, and concerns about the supply of rare metals, the European Commission (EC) has established a new Circular Economy Action Plan (2.0) as a growth strategic pillar of the European Green Deal and is moving forward with measures to accelerate further implementation of resource efficiency into society. For example, the EC has proposed the Circular Electronics Initiative, as well as maintenance for the eco design directive, and is promoting a circular economy through the entire life cycle of products. This is a growing trend all over the world. We believe that from the perspective of recycling resources, it is important for us to make efficient use of the resources in the ICT products that we provide to customers. We have engaged in design that draws on the principles of reduce, reuse, and recycle, and have developed our products with technology that is effective in reducing the amount of resources we use. We are also making efforts to improve resource efficiency and reduce our environmental burden by designing products to be lighter and smaller, using recycled plastics, reducing the number of parts, enhancing ease of disassembly, and improving recyclability. Our goal is to offer such products so that they provide even the customer with benefits, whether it be by making these products smaller, more lightweight, or designing them so they take up less space.

FY 2022 Performance

Targets Under the Fujitsu Group Environmental Action Plan (Stage X)	FY2022 result
Promoting improved resource conservation and recycling in our products and increasing resource efficiency in new products by 10% or more (compared to FY 2019).	Improved by 11.2%

Improving the Resource Efficiency of New Products

In FY 2012, the Fujitsu Group created its own definition of resource efficiency, as the Group had previously not had a system that could comprehensively and quantitatively evaluate improvements in resource efficiency, and due to the fact that there were as of yet no public indices that could measure resource efficiency.

In FY 2022, we continued to use our indicators to evaluate products newly developed by Fujitsu, and worked to reduce product part quantities and reduce product size through smaller, thinner, and lighter parts and higher-density mountings.

We Improved Resource Efficiency by 11.2%

By reducing the size and weight of our servers, PCs, network devices, and imaging devices, in FY 2022 we were able to improve resource efficiency by 11.2% with respect to efficiency in FY 2019.

Looking Ahead

In FY 2023 and beyond, Fujitsu will continue current initiatives, while expanding development of new lightweight, rigid materials and the use of recycled materials. We will also widely publicize the eco-friendliness of our products in order to expand sales.

REFERENCE INFORMATION Definition and Calculation of Resource Efficiency

Resource efficiency is evaluated by dividing the value of a production, by the environmental burden (in terms of use and disposal) of the elements (resources) comprising the products.

$$\text{Resource efficiency} = \frac{\text{Product value}}{\left(\frac{\text{Environmental burden from resource usage}}{\Sigma (\text{Resource burden coefficient} \times \text{Resource usage volume})} + \frac{\text{Environmental burden from resource disposal}}{\Sigma (\text{Resource burden coefficient} \times \text{Resource disposal volume})} \right)}$$

Definition of Each Item

Product value	To place emphasis on the valuation of reduction in environmental burden due to resource usage and disposal, product value is limited to those that related to resource usage and is set on a per-product basis. (Example of factor not considered: CPU performance improvements)
Resource burden coefficient	Environmental burden weighting coefficient that is specific to a particular resource and considers factors like exhaustibility, scarcity, and environmental impact from mining and disposal. Activities will begin with this figure set to a value of "1" for all resources.
Resource usage volume	Mass of each resource used in the product (excluding the mass of recycled plastic used).
Resource disposal volume	Mass of each resource disposed of (not reused) in connection with a post-use product (design value). Activities will begin with this figure set to a value of "0".

Examples of Initiatives in FY 2022

ARROWS Tab Q7312 balancing improved performance of the same sized laptop computer and resource efficiency

ARROWS Tab Q7312 is a high-end tablet device featuring a large screen ideal for a wide range of uses. It offers advanced functions and scalability for business and comes equipped with advanced security features including a TPM 2.0 security chip and (optional) fingerprint scanner. In addition to high-end features, the tablet only weighs about 1.2kg even when including the specialized slim keyboard.

In terms of the environment, ARROWS Tab Q7312 improves resource efficiency by 2.1% with the use of components made of recycled plastics. It is also Energy Star certified because of its reduced consumption of electricity.

By offering the ARROWS Tab Q7312 tablet featuring high-end specifications, scalability and improved resource efficiency, Fujitsu will contribute to a society that is equally considerate of both the environment and people.



ARROWS Tab Q7312/KB

> [Introduction of Other Initiatives \(Case Studies\)](#)

Product Recycling

Our Approach

The Fujitsu Group's recycling activities are based on the concept of Extended Producer Responsibility (EPR), which holds producers responsible for product design and manufacturing as well as disposal and recycling, and the concept of Individual Producer Responsibility (IPR), which holds a company responsible for its own products. Fujitsu is certified for area-wide disposal of industrial waste based on the Act to Promote Effective Utilization of Resources in Japan. In accordance with these concepts, Fujitsu Recycling Centers around Japan are entrusted to properly dispose of industrial waste, and one of Fujitsu's voluntary management indicators is "to reuse at least 90% of the resources in its ICT products for businesses."

Changes in Resource Reuse Rates of End-of-life Business ICT Products

Item	FY 2020	FY 2021	FY 2022
Resource reuse rate (%)	91.6	92.9	93.6

➤ [Introduction of Initiatives \(Case Studies\)](#)

Environmental Action Plan

Reducing the Amount of Water Used

Our Approach

The risk of a global water shortage is on the rise, due to such factors as climate change, the destruction of forests, and the economic growth and population boom in emerging and developing countries. Such a water shortage is a risk for companies as well, since it may very well affect the survival of their businesses. As such, it is important for us to recycle and reduce the amount of water we use.

Since the Fujitsu Group uses particularly large amounts of water in the manufacture of semiconductors and printed circuit boards, we believe it is necessary to reduce our water consumption in these areas especially. In addition to our general water conservation efforts, we have also worked to reuse and recirculate water, through methods such as pure water recycling and the reuse of rainwater. We are continuing our efforts to effectively use water resources in the Environmental Action Plan (Stage X).

FY 2022 Performance

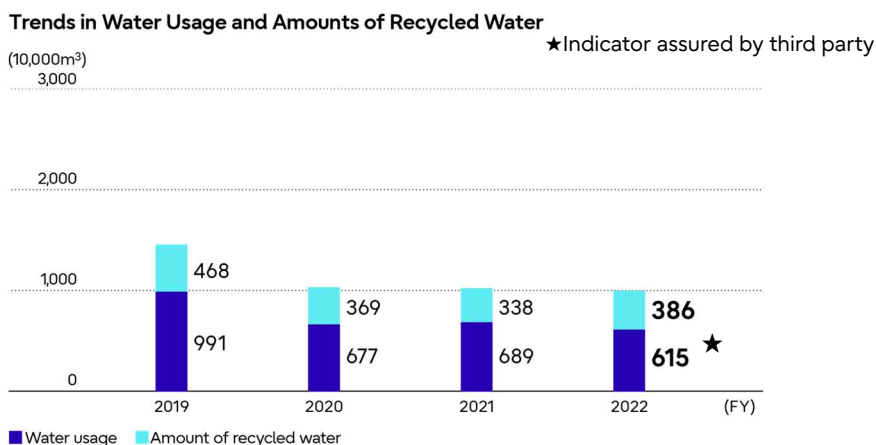
Targets under the Fujitsu Group Environmental Action Plan (Stage X)	FY2022 result
Adding policies to reduce water consumption and reducing water usage by at least 30,000 m ³ by the end of FY 2022. (*1)	Water consumption was reduced 31,000 m ³ (target for FY 2022: 19,000 m ³)

(*1) Target organizations: Japan; Fujitsu and Fujitsu Group offices (excluding data centers) Overseas; Fujitsu and Fujitsu Group manufacturing sites

The policies we established in FY 2022 to reduce water usage include reducing the amount of water used in coating and cleaning processes, reviewing our water supply and wastewater through actions such as optimizing the water supply for our scrubbers, and upgrading air conditioners from water-cooled units to air-cooled units. We implemented these policies at each business site, plant, etc., so that we could make more efficient use of our water resources. As a result, in FY 2022 we reduced our water usage by 114,000 m³, which is 380% of the target of 30,000 m³ as was set in the Fujitsu Group Environmental Action Plan (Stage X).

Water Usage in FY 2022 was 6.15 Million m³★ (a 11% Reduction Compared to the Previous Fiscal Year)

The total amount of water we used in FY 2022 was 6.15 million m³ (output level per sales amount: 166 m³/100 million yen), a reduction of 11% compared to FY 2021. Additionally, 3.86 million m³ of that usage was recycled water, which was an increase of 14.3% in comparison to FY 2021. The total amount of water we used declined, so recycled water comprised 62.8% of our total water usage, a 13.8%pt increase from FY 2021.



Activities to Conserve Water Resources in the Upstream Portion of the Supply Chain

Our Approach

We have also situated the conservation of water resources as a priority issue which we need to ask our suppliers to address, as well as the reduction of CO₂ emissions.

We have participated in the CDP Supply Chain program since FY 2018, in parallel with the above-mentioned activities. Based on our international environmental research activities, we are taking a more in-depth look at the activities of our primary suppliers to reduce CO₂ emissions and conserve water resources, and considering the issues and our policies.

We expect that having the entire supply chain work toward reducing emissions can produce even greater reduction effects (synergies), while also expanding the network of these activities through the supply chain to cover an even wider area spreading beyond national boundaries. Through efforts such as these, the Fujitsu Group hopes to help create a sustainable water environment.

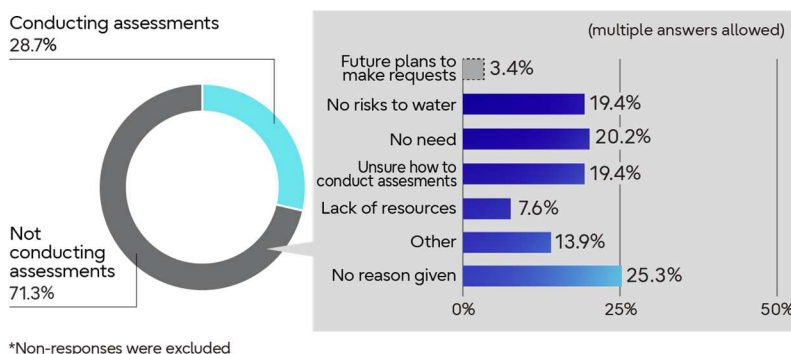
FY 2022 Performance

Targets Under the Fujitsu Group Environmental Action Plan (Stage X)	FY2022 result
Conservation of Water Resources: Request that Primary Suppliers Engage in Activities to Conserve Water	Requested that 676 of the Fujitsu Group's primary suppliers engage in activities to conserve water

Conservation of Water Resources: Requesting that Primary Suppliers Work to Conserve Water Resources as a Key Theme They Should Address

Against the backdrop of worsening water resource problems and growing international concern, in addition to continuing our work to reduce CO₂ emissions as pursued under the Fujitsu Group Environmental Action Plan (Stage VIII) from FY 2016 to FY2018, we situated the conservation of water resources as a priority issue which we need to ask our suppliers to address, starting in FY 2019. We reviewed the questions we posed on our environmental survey forms so that we would be able to understand the status of our suppliers' activities and their actual circumstances, and identified the challenges we will face in expanding our activities in the future.

Status of water risk assessments conducted by suppliers



As many businesses are connected in the global supply chain, conservation of water resources is a relevant issue for any company. The first step in working to conserve water resources is to comprehend exactly what water risks are associated with one's own company. In our FY 2022 environmental survey, 28.7% of suppliers said that they were conducting water risk assessments, which is an increase from 25.7% last year. There was a

decrease in the percentage of responses from suppliers stating that conservation of water resources was not relevant to their operations compared to FY 2021, including “no water risks” (down from 23.6% to 19.4%) and “no need to conduct assessments” (down from 22.7% to 20.2%). Meanwhile, the response of not knowing how to assess water risks increased from 17.2% to 19.4%. We believe this is a reflection of increased awareness among suppliers that water risk assessments are an essential part of business operations.

In order to have suppliers think about conservation of water resources as a more familiar issue, we are offering the "Water Risk Assessment for Companies" document, which compiles materials on topics such as the importance of risk assessments, and introduces publicly available assessment tools. In the future, we will request that even more suppliers conduct water risk assessments and request that they work to conserve water resources.

“Water Risk Assessment for Companies” can be downloaded from the following sites.

- > [Japan](#)
- > [Global](#)

Valuable water, even on "Water Planet"
 Completed based on the website of the Ministry of Land, Infrastructure, Transport and Tourism
 Total global water volume: approx. 1.4 billion km³

- Seawater (brine) 97.5%
- fresh water 2.5%
- Iceberg/Ice sheet 70%
- Groundwater, etc. 30%
- 1% (or less) Easily available Shallow Groundwater (0.01% of the total fresh water)

Why Companies can't be Independent of Water Risk

- *In the "Sustainable Development Goals (SDGs)" adopted by UN in September 2015 including targets for water and sanitation, water-related disasters, and conservation of the water environment.
 - > The private sector, such as enterprises, are required to take a
- *Water risk may overshadow business continuity.
 - > Impact on investor behavior (ex: Growing environmental investments)
 - > Increase and strengthen questions on water resources in various environmental activity evaluations.
- *Even if the internal process is safe, water risk in entire supply chain could affect whole business.
 - > Cooperation with business partners and customers is required.
- *Increased frequency of weather "extreme phenomenon" (floods, droughts, etc.)
 - > Growing global water risk requires constant monitoring now and in the future.

Reference: Long-term changes in (Ministry of Land, Infrastructure, Transport and Tourism Agency) such as heavy rain or extremely hot days (extreme phenomenon) https://www.data.jma.go.jp/cadrf/fo/index_extreme.html
 Reference: Weather and Climate Extracts (The World Climate Research Programme) <https://www.wcrp-climate.org/gc-extremes-themes>

Water risk analysis tools (Example)

- WRI Aqueduct Water Risk Atlas** <https://www.wri.org/aqueduct>
 - Indicate risks by specifying areas by address or latitude-longitude.
 - A detailed breakdown of risk is possible with using 12 metrics.
 - Future risks 10 or 20 years from now can be calculated taking into account climate change, global economic development, population growth, etc.
- WWF-DEG Water Risk Filter** <https://waterisfilter.panda.org/>
 - Display risk by entering industry and address (+ business information as optional).
 - Evaluation results can be output in the CDP Water response format.
 - Risk mitigation measures are presented for indicators evaluated as high risk.
 - Additional water-related opportunity analysis capability is planned.
- WBCSD Global Water Tool**
 - Launched in 2007 as the first public tool for water risk analysis.
 - No longer available since handing over the position to Aqueduct Water Risk Atlas and WWF-DEG Water Risk Filter.

Reference: Other assessment tools or databases that could be available
 - Water Footprint Network Assessment Tool <http://www.waterfootprintassessmenttool.org/assessment/>
 - IPCC Climate Change Projection <https://www.ipcc.ch/report/ar4/wg1/global-climate-projections/>
 - Nispecroft Global Water Security Risk Index <https://www.nispecroft.com/>
 - Hazard maps produced and provided by local governments or the national government

Contents of "Water Risk Assessment for Companies"

Living in Harmony with Nature (Conservation of Biodiversity)

Management Approach

Biodiversity loss poses an enormous global risk; an integrated response is vital to secure a carbon-neutral and nature-positive future

The Global Risks Report 2023 released by the World Economic Forum (WEF), ranks “Biodiversity loss and ecosystem collapse” as the fourth most severe, long-term risk globally, recognizing biodiversity loss alongside climate change as an urgent and critical issue. Viewing the delivery of a nature-positive world as essential to addressing this issue, the G7 Summit held in June 2021 agreed on a G7 2030 Nature Compact, which includes a commitment to “halt and reverse biodiversity loss by 2030”. Part 2 of the 15th Conference of the Parties to the UN Convention on Biological Diversity (CBD-COP15) held in December 2022 adopted the Kunming-Montreal Global Biodiversity Framework, which includes international targets for 2030. The framework establishes “23 Global Targets for 2030” aimed at the 2030 Mission “To take urgent action to halt and reverse biodiversity loss to put nature on a path to recovery for the benefit of people and planet” (excerpt). Business groups such as the World Business Council for Sustainable Development (WBCSD) and international environmental NGOs such as the World Wide Fund for Nature (WWF) have also announced a joint proposal with a target of achieving a nature-positive planet by 2030. Thus, it is now considered vital that we not only have carbon-neutral initiatives to counter climate change, but also integrated measures aimed at delivering nature-positive outcomes.

To deliver nature-positive outcomes, we have established a vision and a mid-term goal in line with international targets

Committed to delivering nature-positive outcomes, in 2022 the Fujitsu Group formulated its vision for 2050, its 2030 Mid-term Target, and its 2025 Short-term Target (Environmental Action Plan Stage XI) in line with international targets (Kunming-Montreal Global Biodiversity Framework).

- Vision for 2050: Create a world in harmony with nature, where "nature and biodiversity," which are fundamental to a sustainable society, are fully restored through digital technology.
- 2030 Mid-term Target: Reduce negative impacts on biodiversity by at least 25% (Base year : FY2020) in the area of company's corporate activities, including supply chain, and promote activities to increase positive impacts on it.
- 2025 Short-term Target: Reduce negative impacts on biodiversity by at least 12.5% (Base year : FY2020) in the area of company's corporate activities, including supply chain, and promote activities to increase positive impacts on it.

We will continue to implement activities to reduce negative impacts and increase positive impacts on biodiversity.

FY2022 Results

Target under the Fujitsu Group Environmental Action Plan (Stage X)	FY2022 results
To visualize and reduce the impact of corporate activities on ecosystems and on biodiversity	Establishment of a calculation method that uses Ecological Footprint (EF) as the indicator for visualizing the impact of corporate activities on biodiversity.

Establishment of a calculation method that uses Ecological Footprint (EF) as the indicator for visualizing the impact of corporate activities on biodiversity

Of the Global Targets for 2030 established by the Kunming-Montreal Global Biodiversity Framework adopted at CBD-COP15, one of the most relevant targets to the business sector is Target 15: "All businesses (public and private, large, medium and small) assess and report on their dependencies and impacts on biodiversity, from local to global, and progressively reduce negative impacts, by at least half and increase positive impacts, reducing biodiversity-related risks to businesses and moving towards the full sustainability of extraction and production practices, sourcing, and supply chains, and use and disposal." At the 24th meeting of the Subsidiary Body on Scientific, Technical and Technological Advice (SBSTTA-24), assessment indicators for each target were also discussed and Ecological Footprint was proposed as one of the candidate indicators for Target 15.

In FY2022, we established a calculation method that uses the Ecological Footprint, (hereinafter referred to as "EF") selected as an indicator to assess negative impacts on biodiversity, to facilitate the comprehensive evaluation of all corporate activities. We used the method to identify significant negative-impact factors in EF assessment in association with the Group's corporate activities.

FY2022 Initiatives in Detail

Establishment of a calculation method that uses Ecological Footprint, an indicator for assessing the negative impacts of corporate activities on biodiversity

The Fujitsu Group selected EF as an assessment indicator for the following reasons:

1. EF is a component indicator for Target 15 of the Global Targets for 2030, proposed by SBSTTA-24, selected based on scientific findings.
2. All corporate activities can be comprehensively evaluated.

- CO-CHAIRS' SUMMARY AND PROPOSED LIST OF INDICATORS FOR CONSIDERATION IN DEVELOPING THE MONITORING FRAMEWORK FOR THE POST-2020 GLOBAL BIODIVERSITY FRAMEWORK

Goal/Milestone/Target ⁵	Headline indicator	Summary of the assessment	Component indicator	Complementary indicators
Target 15. All businesses (public and private, large, medium and small) assess and report on their dependencies and impacts on biodiversity, from local to global, and progressively reduce negative impacts, by at least half and increase positive impacts, reducing biodiversity-related risks to businesses and moving towards the full sustainability of extraction and production practices, sourcing and supply chains, and use and disposal.	15.0.1 [Number of companies assessing and reporting on their][Quantified volumes of] Dependencies [and] impacts[, risks and opportunities] of businesses on biodiversity [and related human rights]	Relevance: Green Nationally feasible: Yellow Globally feasible with national disaggregation: Yellow Readiness: Red Summary: Relevant, not fully operational Most Parties felt that an indicator on dependencies and impacts was relevant; however, such an indicator would need to be further defined and elaborated. Parties suggested a number of adjustments to the indicator and/or alternative indicators	Tbc (will align with the Task Force for Nature-related Financial Disclosures) 15.4.1 Ecological footprint 15.4.2 Recycling rate	t15.1. CO ₂ emission per unit of value added (SDG indicator 9.4.1) t15.2. Change in water-use efficiency over time (SDG indicator 6.4.1)

Source: CBD/SBSTTA/REC/24/2, March 27, 2022

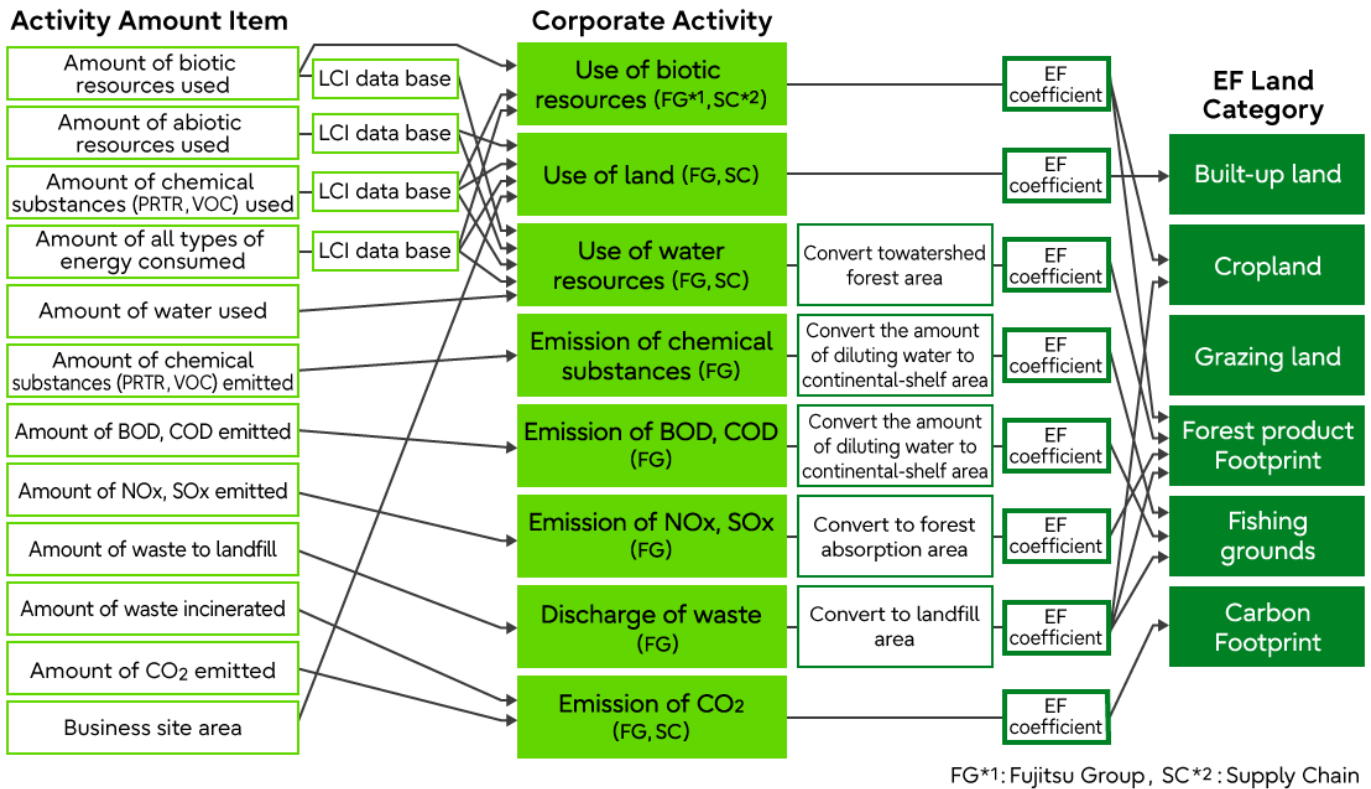
In working on the calculation method, we used the Business & Biodiversity Interrelationship Map® (provided by Japan Business Initiative for Biodiversity (JBIB)) as the basis for extracting items that depend on and also have an impact on biodiversity, and determined the corresponding Activity Amount items, as set out in the table below.

- Table: Nature dependency and impact items in the Fujitsu Group and corresponding activity data

Life Cycle	Dependence on Nature	Impact on Nature	Activity Amount Item	
Procurement	Consumes raw materials	-	Amount of resources used (biotic, abiotic)	
	-	Emission into the atmosphere	Amount of CO ₂ emitted	
Design & Development / Manufacturing	Consumes water resources	-	Amount of water used	
	Consumes chemical substances	-	Amount of PRTR, VOC handled	
	Consumes energy	-	-	Amount of electricity purchased
				Amount of heavy oil Type A used
				Amount of kerosene used
				Amount of gasoline used
				Amount of light oil used
				Amount of natural gas used
				Amount of city gas used
				Amount of LPG used
				Amount of LNG used
	-	Emission into the atmosphere	-	Amount of district heating and cooling supply used
				Amount of CO ₂ emitted
				Amount of NO _x , SO _x emitted
Amount of PRTR, VOC emitted				
-	Discharge into water bodies	-	Amount of waste incinerated	
			Amount of BOD, COD emitted	
-	Discharge into the ground	-	Amount of PRTR emitted	
			Amount of waste to landfill	
Logistics & Sales	Consumes energy	-	Amount of energy consumed	
	-	Emission into the atmosphere	Amount of CO ₂ emitted	
Usage	-	Emission into the atmosphere	Amount of CO ₂ emitted	
Other	-	Land used for business	Business site area	

We then established an EF calculation method, using the above Activity Amount items as inputs. We used life cycle inventory (LCI) data to convert resource use and some of the other Activity Amount items to Corporate Activity items corresponding to EF coefficients. Where an EF coefficient cannot be directly used for certain Corporate Activity items such as use of water resources, this is reflected in the EF calculation by using additional conversion logic based on scientific knowledge and expanded from the original EF.

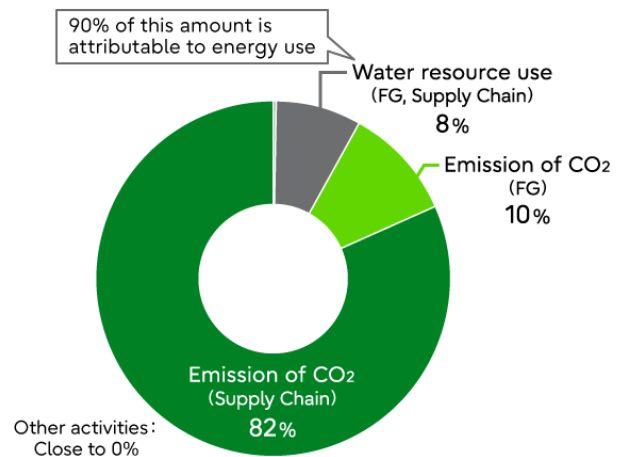
Integrated Assessment of Corporate Activities by Ecological Footprint (EF) in Fujitsu Group



Identifying of Significant Negative-Impact Factors in EF Assessment

The results of our EF assessment of the Fujitsu Group's corporate activities show that CO₂ emissions in the Group and its value chain account for 92% of factors. Use of water resources account for the remaining 8%, mainly attributable to energy consumption. We are therefore able to establish that CO₂ emissions and energy consumption together account for 99% of factors. This means that activities aimed at reducing GHG emissions, such as energy conservation and the introduction of renewable energy, can also reduce the Ecological Footprint. In short, this is evidence that the Group's climate change measures are proving effective in reducing the negative impact on biodiversity. The FY2022 results showed a 4 % reduction in comparison to FY2020 (*1).

EF Calculation Results in Fujitsu Group (FY2020) - Percentage by Corporate Activity -



*1 EF coefficients are fixed for comparison.

Environmental Data

Global Warming Prevention

GHG Emissions Report Based on GHG Protocol ★ Indicators assured by third party

Indicator		FY2019	FY2020	FY2021	FY2022
Upstream (Scope 3) [ktons-CO₂]					
	Purchased goods and service	1,551 (*4)	1,192 (*4)	1,304 (*4)	1,361 ★
	Capital goods	9	15	13	11
	Fuel and energy-related activities not included in Scopes 1 and 2	133	99	94	85
	Transportation and distribution (Upstream)	64	53	71	44
	Waste generated in operations	N/A (*3)	N/A	N/A	N/A
	Business travel	155	27	23	48
	Employee commuting	52	5	6	5
	Leased assets (Upstream)	115	88	64	72
Reporting company (Scope 1, 2) [ktons-CO₂]					
	Direct emissions (Scope1)	87	75	70	65 ★
	Indirect emissions from energy sources (Scope2)	715 (*1) 663 (*2)	583 (*1) 540 (*2)	530 (*1) 428 (*2)	476 (*1) ★ 341 (*2) ★
Downstream (Scope 3) [ktons-CO₂]					
	Transportation and distribution (Downstream)	N/A	N/A	N/A	N/A
	Processing of sold products	14	12	16	16
	Use of sold products	3,791	3,899	5,588 (*4)	3,693 ★
	End-of-life treatment of sold products	N/A	N/A	9 (*4)	5 ★
	Leased assets (Downstream)	N/A	N/A	N/A	N/A
	Franchises	N/A	N/A	N/A	N/A
	Investment	N/A	N/A	N/A	27
Scope3 total [ktons-CO₂]		5,884	5,390	7,157	5,367

*1 Location-based

*2 Market-based

*3 N/A : Not Applicable

*4 In line with the improvement in the accuracy of data collection, we have retroactively adjusted the figures.

Environmental Data

Material Balance

Environmental impact of business activities

★ Indicators assured by third party

INPUT

	Stage	Unit	FY2019	FY2020	FY2021	FY2022
Design / Procurement / Manufacturing / Development	Raw Materials					
	Metal	ktons	19	12 (*5)	11	11
	Plastic	ktons	7	4 (*5)	5	3
	Others	ktons	13	8 (*5)	9	7
	Chemical Substances (*1)					
	VOC	ktons	0.6	0.3	0.3	0.3
	PRTR	ktons	9.6	9.8	9.5	7.9
	Water					
	Water usage	Million m ³	9.91	6.77	6.89	6.15★
	Energy (*2)					
	Total	PJ	6.89	5.88	5.57	5.09★
	Purchased electricity	GWh	1,477	1,240	1,165	1,062
	Heavy oil, kerosene, etc.	kL	3,570	2,898	2,593	2,440
	LPG, LNG	tons	2,115	2,078	1,982	1,929
	Natural gas, city gas	Million m ³	28.93	25.24	24.99	22.89
District heating and cooling	TJ	37	52	42	39	
Distribution / Sales	Energy					
	Fuel (light oil, gasoline, etc.)	PJ	0.95	0.77	1.03	0.63
Usage	Energy					
	Electricity	GWh (PJ) (*6)	8,224 (29.61)	10,171 (*5) (36.61)	12,672 (*3) (45.62)	10,455 (37.64)
Collection / Reuse / Recycling	Resources recycling rate	%	91.1	91.6	92.9	93.6
	Amount processed	tons	3,210	2,991	2,393	1,996

OUTPUT

	Stage	Unit	FY2019	FY2020	FY2021	FY2022
Design / Procurement / Manufacturing / Development	Raw Materials					
	CO ₂ emissions	ktons-CO ₂	450	305 (*5)	312 (*3)	201
	Chemical Substances (*1)					
	VOC	tons	161	135	157	161★
	PRTR	tons	8	6	6	5★
	Atmospheric Release					
	Total GHG emissions	ktons-CO ₂	802	658	600	540★
	CO ₂ (*3)	ktons-CO ₂	795	653	598	538★
	GHG other than CO ₂ (PFCs, HFCs, SF ₆ , NF ₃ , others)	ktons-CO ₂	7	5	2	2★
	NOx	tons	47	26	10	33
	SOx	tons	1	1	0.3	0.3
	Water Discharge					
	Total	Million m ³	9.06	6.48	6.68	5.13
	BOD	tons	274	303	301	219
	COD	tons	35	9	15	12
	Waste					
	Amount of Waste Generated	ktons	15.7	11.0	12.5	11.6★
Thermal recycling volume	ktons	2.8 (*3)	1.5 (*3)	1.8 (*3)	1.7★	
Material recycling volume	ktons	12.3 (*3)	9.0 (*3)	10.0 (*3)	9.4★	
Disposal volume	ktons	0.6	0.5	0.7	0.5★	
Distribution / Sales	Atmospheric Release					
	CO ₂	ktons-CO ₂	64	53	71	44
Usage	Atmospheric Release					
	CO ₂	Million tons-CO ₂	3.79	3.90	5.59 (*3)	3.69★

*1 Substances that qualify as both a PRTR targeted chemical and a VOC are included under "VOCs" only.

*2 We used the calorific value conversion factor of 9.97 MJ/kWh specified by the Act on the Rational Use of Energy (Energy Conservation Act) to disclose the value of electricity consumption converted to primary energy, but we have changed the method to disclose the value without conversion to primary energy from this fiscal year.

*3 In line with the improvement in the accuracy of data collection, we have retroactively adjusted these figures.

*4 Location-based

*5 Figures have been revised due to changes in business areas.

*6 We used to disclose the primary energy conversion value of electricity consumption in PJ units using the calorific conversion factor specified by the Act on the Rational Use of Energy (Energy Conservation Act), but we have changed the method to disclose the value without primary energy conversion.

Environmental Performance Data Calculation Standards

- Applicable Period: April 1, 2022 – March 31, 2023

Fujitsu Group Environmental Action Plan (Stage X)

Boundary : Refer to 5 -3 -4 in this Book

Target Item	Indicator	Unit	Calculation Method
Reduce greenhouse gas (GHG) emissions from business sites each year by 4.2% or more, compared with the base year of FY2013.	GHG emissions	tons-CO ₂	<ul style="list-style-type: none"> • Amount of CO₂ emissions: <ol style="list-style-type: none"> ① Fuel, gas and heat supplied $\Sigma[(\text{Annual consumption of fuel oil, gas and heat supplied}) \times \text{CO}_2 \text{ conversion factor for each type of energy}^*]$ *CO₂ conversion factor: Conversion factor based on the Act on Promotion of Global Warming Countermeasures ② Electricity Annual electricity consumption x CO₂ conversion factor (for location and market calculations) • Location-based: <ul style="list-style-type: none"> • Japan: Usage of 0.436 tons-CO₂/MWh in FY 2021 (Source: Adjusted emission factors published on February 13, 2023 from the Electric Power Council for a Low Carbon Society) • Overseas: Latest IEA value (IEA Emissions Factors 2022) • Market-based: <ul style="list-style-type: none"> • Japan: FY 2021 emission factors for each power producer are used (adjusted emission factors) (Source: GHG Emissions Accounting, Reporting, and Disclosure System List of Emission Factors by Power Producer) • Overseas: Value of the power company or the latest IEA value (IEA Emissions Factors 2022)
	Rate of reduction of GHG due to voluntary efforts	%	(Total amount of GHG reductions due to voluntary efforts / total amount of GHG emissions in the previous fiscal year) × 100
Improve PUE (Power Usage Effectiveness) of our data centers by 3%, compared with FY 2017.	Rate of PUE improvements	%	<ul style="list-style-type: none"> • $\text{PUE} = \Sigma (\text{Total DC energy consumption}) \div \Sigma (\text{Total IT device energy consumption})$ Σ: Combined total energy of the 23 main DCs • Rate of improvement (%) = (Base fiscal year PUE - PUE for the current fiscal year) ÷ Base fiscal year PUE x 100 Base fiscal year: FY 2017
Increase renewable energy usage to 16% of total electricity.	Ratio of renewable energy use	%	Ratio of the total amount of electricity generated by the company and purchased from outside using renewable energy (Solar, wind, hydro, biomass, geothermal, etc.) used in the fiscal year to the amount of electricity used in the fiscal year

Reduce CO ₂ emissions due to power consumption during product usage by 17% or more, compared with FY2013.	Rate of reduction in CO ₂ emissions when products are used	%	Rate of reduction in GHG emissions based on FY 2013 emissions, as calculated under Scope 3: Use of products sold downstream
Promote eco design for resource saving and circulation and increase resource efficiency of newly developed products by 10% or more, compared with FY 2019.	Rate of improvement of resource efficiency of new products	%	<ul style="list-style-type: none"> The average rate of improvement of resource efficiency (versus FY 2019) of products*. * Hardware products under the Fujitsu Brand, newly developed between FY 2021 and FY 2022. Excludes products not designed by Fujitsu (OEM products) and products designed under customer specifications. * Refer to "Improving resource efficiency of products" for the resource efficiency calculation method.
Reduce water usage by 30,000 kiloliters or more by implementing water resource conservation measures.	Amount of water usage reduction	m ³	Take the accumulated impact (actual or estimated) of water use reduction measures implemented at each business site, and calculate the amount of reduction for the relevant fiscal year

GHG Emissions Amount Report based on GHG Protocol

Indicator		Unit	Calculation Method
Upstream (Scope 3)	Purchased goods and services	tons-CO ₂	Components purchased during the fiscal year x Emissions per unit of purchase (Source: Embodied Energy and Emissions Intensity Data (3EID) published by the National Institute for Environmental Studies Center for Global Environmental Research) The procurement volume is for the Fujitsu Group's centralized purchasing and does not include voluntary procurement by each Group company
	Capital goods	tons-CO ₂	Total amount of acceptance inspection of construction objects in the fiscal year x emission intensity (Source: Database for calculating an organization's greenhouse gas emissions through its supply chain ver. 3.2 published by the Ministry of the Environment and the Ministry of Economy, Trade and Industry)
	Fuel and energy-related activities (not included in Scope 1 or 2)	tons-CO ₂	Annual amounts of fuel oil and gas, electricity and heat purchased (consumed) mainly at business sites owned by Fujitsu x Emissions per unit (Source: Database for calculating an organization's greenhouse gas emissions through its supply chain ver. 3.1 published by the Ministry of the Environment and the Ministry of Economy, Trade and Industry, Based on the Japanese emissions intensity database, IDEA v2.3 (For calculating greenhouse gas emissions in the supply chain))
	Transportation and distribution (upstream)	tons-CO ₂	Transportation of goods within Japan: CO ₂ emissions related to the transportation of goods within Japan by the Fujitsu Group * CO ₂ emissions related to domestic transportation by the Fujitsu Group, based on the Act on the Rational Use of Energy as a source. The fuel economy method (for some vehicles) or the improved ton-kilometer method (vehicle, rail, air)
		tons-CO ₂	International transport/overseas local transport: transportation ton-kilometer x Emission per unit (Source: GHG protocol emissions coefficient database)
Waste generated in operations	tons-CO ₂	Annual amounts of waste (discharged mainly by business sites owned by Fujitsu) processed or recycled, by type and processing method x Emissions per unit of annual amount of waste processed or recycled (Source: Database for calculating an organization's greenhouse gas emissions through its supply chain ver. 3.2 published by the Ministry of the Environment and the Ministry of Economy, Trade and Industry, Based on the Japanese emissions intensity database, IDEA v2.3 (For calculating greenhouse gas emissions in the supply chain))	

	Business travel	tons-CO ₂	(By means of transport) Σ (Transportation expense payment x Emissions per unit) (Source: Basic Guidelines for Calculating Greenhouse Gas Emissions Via Supply Chains Ver. 2.3 and Emissions per Unit Database Ver. 3.1 published by the Ministry of the Environment and the Ministry of Economy, Trade and Industry)
	Employee commuting	tons-CO ₂	For portions of commute by public transportation: (By means of transport) Σ (Transportation expense payment x Emissions per unit) (Source: Same as above) For portions of commute by private automobile: Σ (Transported persons-kilometer x Emissions per unit) (Source: Same as above) Transported persons-kilometer : calculated from transportation expense payment, price of gasoline, and fuel efficiency
	Leased assets (Upstream)	tons-CO ₂	Annual amounts of fuel oil, gas, electricity, and heat consumed mainly at leased business sites x Emissions per unit of fuel oil, gas, electricity, and heat consumed (Sources – Japan: Act on Promotion of Global Warming Countermeasures – GHG Emissions Accounting, Reporting, and Disclosure System; Overseas: IEA CO ₂ Emissions from Fuel Combustion Highlights 2021)
Reporting company (Scope 1, 2)	Direct emissions	tons-CO ₂	Amount of CO ₂ emissions from the consumption of fuel oil and gas (burning of fuel) and GHG emissions other than CO ₂ , mainly at business sites owned by Fujitsu * For the calculation method, see "Reduce greenhouse gas (GHG) emissions from business sites each year by 4.2% or more" in the Environmental Action Plan (Stage X)
	Indirect emissions from energy sources	tons-CO ₂	CO ₂ emissions from the consumption (purchase) of electricity and heat mainly at business sites owned by Fujitsu * For the calculation method, see "Reduce greenhouse gas (GHG) emissions from business sites each year by 4.2% or more" in the Environmental Action Plan (Stage X).
Downstream (Scope 3)	Processing of sold products	tons-CO ₂	Intermediate product sales volume ^{*1} x Emissions per unit of processing volume ^{*2} *1 Intermediate product sales volume: Fujitsu's device solution sales *2 Emissions per unit of processing volume: Calculated from Fujitsu's FY 2015 assembly plant data
	Use of sold products	tons-CO ₂	Electricity consumption during product use ^{*3} x Emissions per unit electricity ^{*4} *3 Electricity consumption during product use: Calculated as power consumption per unit of each major product shipped in the fiscal year*1 during the estimated time of use x Units shipped for the subject fiscal year. Electricity usage for the anticipated usage time per product unit is calculated as electricity consumed (kW) x Time used (h / Days) x Number of days used / Year x Number of years used. Time used (h), number of days used per year, and number of years used are set according to Fujitsu's internal scenarios *4 Emissions intensity: • Japan: Usage of 0.436 tons-CO ₂ /MWh in FY 2021 (Source: Adjusted emission factors published on February 13, 2023 from the Electric Power Council for a Low Carbon Society) • Overseas: Latest IEA value (IEA Emissions Factors 2022)
	End-of-life treatment of sold products	tons-CO ₂	Σ (Weight of major products sold during the fiscal year ^{*1} by type (t) x Percentage of waste by type and treatment method (%) ^{*5} x Emissions intensity by type and treatment method (tCO ₂ e/t)) (Source: Database for calculating an organization's greenhouse gas emissions through its supply chain ver. 3.3 published by the Ministry of the Environment and the Ministry of Economy, Trade and Industry. The emission intensity includes the transportation stage of waste.) *5 The percentage by type of waste and disposal method is calculated based on the waste disposal results of our company Recycling Center in the previous fiscal year for products sold, and based on the waste disposal results of the PC3R Promotion Association for the current fiscal year for other products collected.

Response to Environmental Risks: Environmental Liabilities

Indicator	Unit	Calculation Method
Cost of environmental liabilities	Yen	1. Asset retirement obligation (Only asbestos removal cost related to facility disposal) 2. Cost for soil contamination countermeasures 3. Disposal processing cost for waste with high concentration of PCB (polychlorinated biphenyl)

Response to Environmental Risks: Preventing Soil and Groundwater Pollution

Indicator	Unit	Calculation Method
Measured value of groundwater pollution	mg/L	The highest value in the fiscal year for substances detected at levels exceeding regulated levels set in the Soil Contamination Countermeasures Act, etc., at monitoring wells at the boundaries of sites where past business activities have resulted in soil contamination

Material Balance

Boundary : Refer to the ["List of Organizations Covered by the Report on Environmental Activities"](#) or 5-3-5-10~5-3-5-13 in this book.

Indicator		Unit	Calculation Method	
INPUT				
Design/ Procurement/ Manufacturing/ Development	Raw Materials	tons	Material inputs to our major products *1 shipped from plants in the fiscal year (raw materials per unit for each product x The number of units shipped in the fiscal year)	
	Chemical Substances	Volume of substances subject to VOC emissions restrictions	tons	Of the 20 VOCs (Volatile Organic Compounds) specified in the environmental voluntary action plans of the four electrical and electronic industry associations*2, total amounts handled are provided for those substances handled in quantities exceeding 100 kg annually per substance at individual business sites, including overseas sites Substances subject to VOC emissions controls that are also covered by the PRTR law are included in the section on substances subject to VOC emissions controls
		Volume of PRTR-targeted substances	tons	Of the substances covered by the PRTR law (Act on Confirmation, etc. of Release Amounts of Specific Chemical Substances in the Environmental and Promotion of Improvements to the Management Thereof), totals are provided for those substances handled in quantities exceeding 100 kg annually per substance per business site, including overseas sites
	Amount of water used	m ³	Annual use of clean water, industrial water and groundwater (not including groundwater used for melting snow or extracted for purification.)	
	Amount of Recycled water	m ³	Annual amount of water used for manufacturing and other purposes once, then recovered, processed, and used again for manufacturing and other processes.	
	Energy consumption (calorie basis)	GJ	Σ [Purchased electricity + Local Heat Supply + (Annual consumption of fuel oil and gas) x Thermal conversion factor for each type of energy*] * Thermal conversion factor (Heating value unit): According to the "Act on the Rational Use, etc., of Energy," conversion factors from each supplier or 44.8 GJ/1000 m ³ were used for town gas.	

		Purchased electricity	MWh	Annual electricity purchases
		Bunker A, fuel oil, light oil, benzine, gasoline	kL	Annual fuel oil usage (or purchases)
		Natural gas	m ³	Annual natural gas usage (or purchases)
		Town gas	m ³	Annual town gas usage (or purchases)
		LPG	tons	Annual LPG usage (or purchases)
		LNG	tons	Annual LNG usage (or purchases)
		District heating and cooling	GJ	Annual district heating and cooling (cold and hot water for cooling and heating) usage (or purchases)
Distribution / Sales	Energy consumed for transport		GJ	Total value of transport energy consumption for Fujitsu* ¹ and Fujitsu Group companies * ² * ¹ Fujitsu (domestic transport): Energy consumption related to domestic transport by the Fujitsu Group, based on the Act on the Rational Use of Energy "Logistics." * ² Fujitsu Group Companies: Calculated from the transport CO ₂ emissions from OUTPUT (distribution and sales) using the ratio of Fujitsu (domestic transport) transport energy consumption to transport CO ₂ emissions.
Use of sold Products	Energy	Electricity	GWh	Electricity consumed in connection with major products * ¹ shipped from plants during the fiscal year (Amount of electricity used for time estimated per product unit x Units shipped in the fiscal year) * Unit conversion factor : Physical quantity is used for energy conversion of electric power quantity (3.6MJ/kWh)."
			PJ	
Recycling of resources	Resource recycling rate		%	Based on the calculation method provided by JEITA, recycled components and resources are calculated as a percentage of the weight of used products processed in Japan. Excludes collected waste other than used electronic products.
	Processed volume		tons	
OUTPUT				
Design/ Procurement/ Manufacturing/ Development	Raw Materials	CO ₂ emissions	tons -CO ₂	CO ₂ emissions related to all stages from resource extraction through processing into raw materials (CO ₂ emissions equivalent for raw materials used per product unit x Units shipped in the fiscal year) for the raw materials used in major products* ¹ shipped from plants in the fiscal year
	Chemical Substances	Volume of substances subject to VOC emissions restrictions	tons	Of the 20 VOCs (Volatile Organic Compounds) specified in the environmental voluntary action plans of the four electrical and electronic industry associations* ² , total amounts released are provided for those substances handled in quantities exceeding 100 kg annually per substance at individual business sites, including overseas sites. Substances subject to VOC emissions controls that are also covered by the PRTR law are included in the section on substances subject to VOC emissions controls.
		Volume of PRTR-targeted substances released	tons	Of the substances covered by the PRTR law (Act on Confirmation, etc. of Release Amounts of Specific Chemical Substances in the Environment and Promotion of Improvements to the Management Thereof), released totals are provided for those substances handled in quantities exceeding 100 kg annually per substance per business site, including overseas sites. It is the sum of air emissions and water emissions.

	Atmospheric pollution	CO ₂ emissions	tons-CO ₂	* For the calculation method, see "Greenhouse gas emissions (CO ₂ emissions) from business sites" in the Environmental Action Plan (Stage X).
		GHG emissions other than CO ₂	tons-CO ₂	* For the calculation method, see "Greenhouse gas emissions (GHG emissions other than CO ₂) from business sites" in the Environmental Action Plan (Stage X).
		NO _x emissions	tons	NO _x concentration (ppm) x 10 ⁻⁶ x Dry gas emissions (m ³ N/hr) x Operating time (hr/yr) x 46/22.4 x 10 ⁻³
		Sox emissions	tons	SO _x concentration (ppm) x 10 ⁻⁶ x Dry gas emissions (m ³ N/hr) x Operating time (hr/yr) x 64/22.4 x 10 ⁻³
	Water Discharge	Wastewater discharges	m ³	Annual water discharge into public waterways and sewers (not including groundwater used for melting snow, but including groundwater extracted for purification when the amount of water is known)
		BOD emissions	tons	BOD concentration (mg/l) x Water discharges (m ³ /yr) x 10 ⁻⁶
		COD emissions	tons	COD concentration (mg/l) x Water discharges (m ³ /yr) x 10 ⁻⁶
	Waste	Amount of waste generated	tons	Total value obtained by adding the total amount of effective utilization (thermal recycling, material recycling) and the amount of waste processed
		Thermal recycling volume	tons	Among all types of waste put to effective use, the total volume used in thermal recycling * Thermal recycling: Recovery and use of the heat energy generated by incinerating waste
		Material recycling volume	tons	Among all types of waste put to effective use, the total volume used in material recycling * Material recycling: Processing of waste to facilitate its reuse, and reuse of processed waste as material or raw materials for new products
Disposal volume		tons	Volume of industrial and general waste processed by, for example, landfilling or simple incineration	
Distribution / Sales	Atmospheric Release	tons-CO ₂	For the calculation method, see "Transportation and distribution (upstream)" in the GHG Emissions Amount Report based on GHG Protocol.	
Use of sold Products	Atmospheric Release	tons-CO ₂	For the calculation method, see "Use of sold products" GHG Emissions Amount Report based on GHG Protocol.	

*1 Major products: Personal computers, servers, workstations, storage systems, printers, financial terminals, retail terminals, routers, LAN access equipment, access network products and mobile phone base stations.

*2 Four electrical and electronic industry associations:
The Japan Electrical Manufacturers' Association (JEMA), Japan Electronics and Information Technology Industries Association (JEITA), Communications and Information Network Association of Japan (CIAJ), and Japan Business Machine and Information System Industries Association (JBMIA).

Environmental Data

List of Organizations Covered by the Report on Environmental Activities in FY2022

Organizations covered by the report

The coverage is of Fujitsu itself plus a total of 82 companies centering on consolidated subsidiaries that have built environmental management systems. The table below shows the organizations*1 for which individual performance data is gathered.

*1 The following company names are as of March 31, 2023.

Organizations covered by each Indicators

- ①GHG emissions : All Fujitsu Group business sites
- ②Scope 1, 2 : Fujitsu and the Fujitsu Group's own offices and managed rental offices
- ③Energy : Fujitsu and the Fujitsu Group's own offices and managed rental offices
- ④Water : Japan; Fujitsu and Fujitsu Group offices excluded datacenters
Overseas; Fujitsu and Fujitsu Group manufacturing sites
- ⑤Waste : Japan; Fujitsu offices excluded datacenters and Fujitsu Group manufacturing sites.
From FY 2021, waste plastics from rental offices are included in the calculation.
Overseas; Fujitsu and Fujitsu Group manufacturing sites
- ⑥Chemical : Fujitsu and Fujitsu Group manufacturing sites
*The sites that handle less than 100 kg per substance per year are excluded.
- ⑦EMS : Organizations with Environmental Management Systems (EMS). Including organizations with voluntary EMS.

Headquarters

No.	Company name	①	②	③	④	⑤	⑥	⑦
1	Fujitsu Limited	✓	✓	✓	✓	✓	✓	✓

Fujitsu Group companies in Japan (58companies)

No.	Company name	①	②	③	④	⑤	⑥	⑦
1	FUJITSU HOME & OFFICE SERVICES LIMITED	✓						✓
2	Kawasaki Frontale Limited	✓						✓
3	Fujitsu Techno Research Limited	✓						✓
4	DIGITAL PROCESS LTD.	✓						✓
5	PFU LIMITED	✓	✓	✓	✓	✓	✓	✓
6	FUJITSU BANKING SOLUTIONS LIMITED	✓						✓
7	SHIGA FUJITSU SOFTWARE LIMITED	✓						✓
8	FUJITSU KAGOSHIMA INFONET LIMITED	✓						✓
9	FUJITSU CLOUD TECHNOLOGIES LIMITED	✓						✓

10	G-Search Limited	✓						✓
11	FUJITSU FSAS INC.	✓						✓
12	FUJITSU COMMUNICATION SERVICES LIMITED	✓						✓
13	FUJITSU NETWORK SOLUTIONS LIMITED	✓						✓
14	Fujitsu Frontech Limited	✓	✓	✓	✓	✓	✓	✓
15	Fujitsu Japan Limited	✓	✓		✓			✓
16	FUJITSU SYSTEM INTEGRATION LABORATORIES LIMITED	✓						✓
17	FUJITSU TOKKI SYSTEMS LIMITED	✓						✓
18	FUJITSU DEFENSE SYSTEMS ENGINEERING LIMITED	✓						✓
19	FUJITSU LEARNING MEDIA LIMITED	✓						✓
20	FUJITSU RESEARCH INSTITUTE	✓						✓
21	FUJITSU CoWorCo LIMITED	✓						✓
22	TWO-ONE LIMITED	✓						✓
23	FUJITSU I-NETWORK SYSTEMS LIMITED	✓	✓	✓	✓	✓	✓	✓
24	Fujitsu Telecom Networks Limited	✓	✓	✓	✓	✓	✓	✓
25	FUJITSU IT PRODUCTS LIMITED	✓	✓	✓	✓	✓	✓	✓
26	Fujitsu Isotec Limited	✓	✓	✓	✓	✓	✓	✓
27	FUJITSU PERSONAL SYSTEM LIMITED	✓						✓
28	FUJITSU QUALITY LABORATORY ENVIRONMENT CENTER LTD.	✓						✓
29	Fujitsu Optical Components Limited	✓	✓	✓	✓	✓	✓	✓
30	FDK CORPORATION	✓	✓	✓	✓	✓	✓	✓
31	Transtron Inc.	✓	✓	✓	✓	✓		✓
32	SHINKO ELECTRIC INDUSTRIES CO. LTD.	✓	✓	✓	✓	✓	✓	✓
33	FUJITSU SEMICONDUCTOR LIMITED	✓						✓
34	FUJITSU CAPITAL LIMITED	✓						✓
35	FUJITSU DATA CENTER SERVICE CORPORATION	✓						✓
36	FUJITSU SEMICONDUCTOR MEMORY SOLUTION LIMITED	✓						✓
37	Fujitsu IT Management Partner Co. Ltd.	✓						✓
38	Fujitsu IS Service Limited	✓						✓
39	FUJITSU ADVANCED SYSTEMS LIMITED	✓						✓
40	FUJITSU SHIKOKU INFOTEC LIMITED	✓						✓
41	Ridgelinez Limited	✓						✓
42	FUJITSU NETWORK SERVICE ENGINEERING LIMITED	✓						✓
43	FUJITSU SOCIAL LIFE SYSTEMS LIMITED	✓						✓
44	Mobile Techno Corp.	✓						✓
45	Per Te Corporation	✓						✓
46	Care Net Ltd.	✓						✓
47	Fujitsu Advance Accounting service Limited	✓						✓
48	Fujitsu Harmony Limited	✓						✓

49	AB System Solutions Limited	✓						✓
50	ZIS INFORMATION TECHNOLOGY CORPORATION	✓						✓
51	Fujitsu Yamagata Information Technology Limited.	✓						✓
52	BANKING CHANNEL SOLUTIONS Limited	✓						✓
53	IT MANAGEMENT PARTNERS LIMITED	✓						✓
54	YJK Solutions Co., Ltd.	✓						✓
55	Best Life Promotion Ltd.	✓						✓
56	Fujitsu Traffic & Road Data Service Limited	✓						✓
57	Fujitsu Engineering Technologies Limited	✓						✓
58	FITEC	✓						✓

Fujitsu Group companies worldwide (23 companies)

No.	Company name	①	②	③	④	⑤	⑥	⑦
1	江蘇富士通通信技術有限公司 (Jiangsu Fujitsu Telecommunications Technology Co., Ltd.)	✓	✓	✓	✓	✓		✓
2	FUJITSU HONG KONG LIMITED	✓						✓
3	FUJITSU DO BRASIL LIMITADA	✓	✓	✓				✓
4	FUJITSU ASIA PTE LTD	✓						✓
5	FUJITSU NETWORK COMMUNICATIONS, INCORPORATED	✓	✓	✓	✓	✓		✓
6	Fujitsu North America, Inc.	✓	✓	✓				✓
7	FUJITSU BUSINESS TECHNOLOGIES ASIA PACIFIC LIMITED	✓						✓
8	FUJITSU AUSTRALIA LIMITED	✓	✓	✓				✓
9	Fujitsu Technology Solutions GmbH	✓	✓	✓				✓
10	南京富士通南大軟件技術有限公司 (Nanjing Fujitsu Nanda Software Technology Co., Ltd.)	✓						✓
11	FUJITSU SERVICES LIMITED	✓	✓	✓				✓
12	FUJITSU KOREA LIMITED	✓						✓
13	台灣富士通股分有限公司 (FUJITSU TAIWAN LIMITED)	✓						✓
14	富士通(中国)信息系統有限公司 (Fujitsu (China) Holdings Co., Ltd.)	✓						✓
15	富士通(西安)系統工程有限公司 (FUJITSU (XI'AN) SYSTEM ENGINEERING Co., Ltd.)	✓						✓
16	北京富士通系統工程有限公司 (Beijing Fujitsu System Engineering Co., LTD.)	✓						✓
17	FUJITSU Enabling Software Technology GmbH	✓						✓
18	富士通(中国)有限公司 (FUJITSU (CHINA) Co., Ltd.)	✓						✓
19	Fujitsu Finance America, Inc.	✓						✓
20	FUJITSU EMEA PLC	✓						✓
21	Fujitsu Systems Global Solutions Management Sdn. Bhd.	✓						✓

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22	FUJITSU CONSULTING INDIA PRIVATE LIMITED	✓	✓	✓				
23	FUJITSU CONSULTING COSTA RICA, S.A	✓						