Global Responsible Business

- Environment -

In line with the "FUJITSU Climate and Energy Vision", a Medium- to Long-Term Environmental Vision for 2050 which clarifies the role to be played in tackling global climate change as well as the future vision to be realized, we will work on to achieve zero emissions of the CO_2 from our own operation by 2050, and contribute to climate change adaptation as well as a de-carbonized society through technology supporting digital transformation.

Environmental Management

Environmental Policy

Since its founding in 1935, the Fujitsu Group has made environmental preservation one of the most important elements in its management, based on its philosophy of "manufacturing in harmony with nature." We have formulated the Fujitsu Group Environmental Policy to promote environmental management reflecting the distinct character of our businesses.
In 1992, when Agenda 21(*1) was adopted at the Rio de Janeiro Global Summit, we established Fujitsu's Commitment to the Environment. This was created in the mold of the Global Environment Charter, announced by the Japanese Federation of Economic Organizations in the previous year. In October 2002, when the Johannesburg Summit was held, and summit participants were debating how to execute Agenda 21 in a more effective way, we revised this Commitment to create a Fujitsu Group Environmental Policy. Our objective in this revision was to implement environmental management in a way that reflects the distinct character of the Fujitsu Group's business, responding to more and more diverse problems where environmental management is increasingly vital.

*1 Agenda 21:
A concrete plan of action for sustainable development, to be carried out by various countries and international organizations. It involves programs to deal with environmental issues, including social and economic problems such as population, poverty and human settlement issues, as well as soil, forests, the atmosphere, desertification, agriculture, biodiversity, water, hazardous wastes and chemical materials.

Philosophy

The Fujitsu Group recognizes that global environmental protection is a vital business issue. By utilizing our technological expertise and creative talents in the ICT industry, we seek to contribute to the promotion of sustainable development. In addition, while observing all environmental regulations in our business operations, we are actively pursuing environmental protection activities on our own initiative. Through our individual and collective actions, we will continuously strive to safeguard a rich natural environment for future generations.

Principles

- We help customers and society reduce the environmental impact of their business activities and improve environmental efficiency with comprehensive services that include advanced technologies, ICT products and solutions.
- We proactively promote environmentally conscious business activities to help the environment and economy coexist harmoniously.
- We strive to reduce the environmental impact of our ICT products and solutions throughout their entire lifecycle(*2).
- We are committed to conserving energy and natural resources, and practice the 3Rs approach (reduce, reuse and recycle) to create best-of-breed eco-friendly products and solutions.
- We seek to reduce risks to human health and the environment from the use of chemical substances and waste.
- We disclose environment-related information on our business activities, ICT products and solutions, and utilize the resulting feedbacks to critique ourselves in order to further improve our environmental programs.
- We encourage our employees to work on global environmental conservation such as tackling climate change and preservation of biodiversity through their business and civic activities to be role models in society.

Revised in April 2011
President
Fujitsu Limited

*2 The lifecycle includes "Procurement", "Distribution and Logistics", "Development and Manufacturing", "Usage", "Recycle and Management of Waste", etc. The stakeholders through the lifecycle represent "Suppliers", "Contractors", "Clients", "Business Partners" and so on.

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.

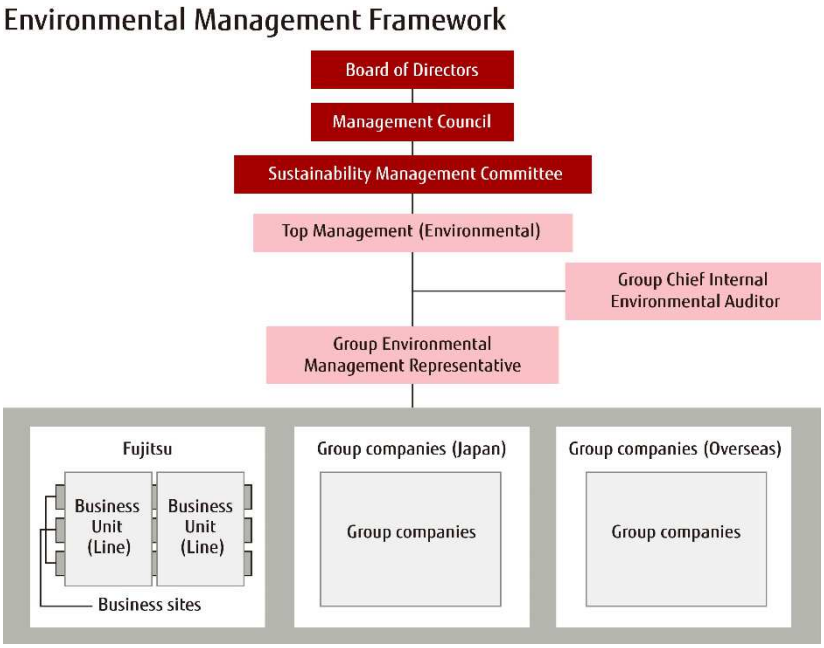
Fujitsu Group's Environmental Management Systems (EMS)

Fujitsu 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 Japanese consolidated subsidiaries at the end of FY 2004, we expanded this effort to include overseas subsidiaries and acquired global integrated certification in FY 2005.

Environmental Management Framework

In April 2020, Fujitsu 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 "environmental initiatives" medium-to-long term visions considered and activity policy discussed and decided, and business operations being considered with risks and opportunities from climate change, with regular reports into Sustainability Management Committee, which aim of raising the level of the EMS and strengthening its governance. Based on that, final approvals on environmental management at the Fujitsu Group are made at meetings of the Management Council. Within the Sustainability Management Committee, we have organized environmental issue-specific working groups, etc., composed of relevant parties that go beyond the framework of business groups and business units. Through this promotion structure, we are moving swiftly to popularize initiatives for addressing environmental issues throughout the Group.
We have also established an Environmental Management Working Group (WG) which is working to unify information transmission throughout the entirety of the Group, in addition to strengthening EMS activities.

Environmental Management Framework

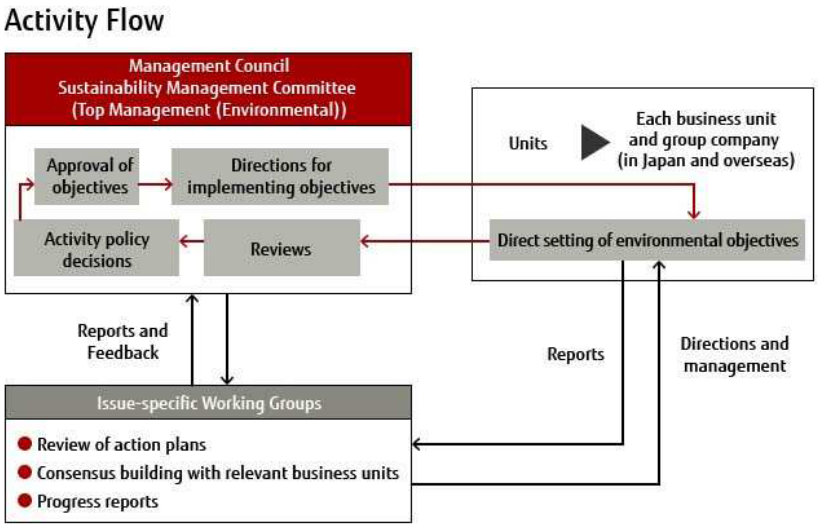


Constructing and Operating Environmental Management Systems

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 2020, the Fujitsu Group has acquired global integrated ISO 14001 certification for a total of 61 companies of Fujitsu and its Japanese Group companies, as well as for 7 overseas Group companies.

Activity Flow

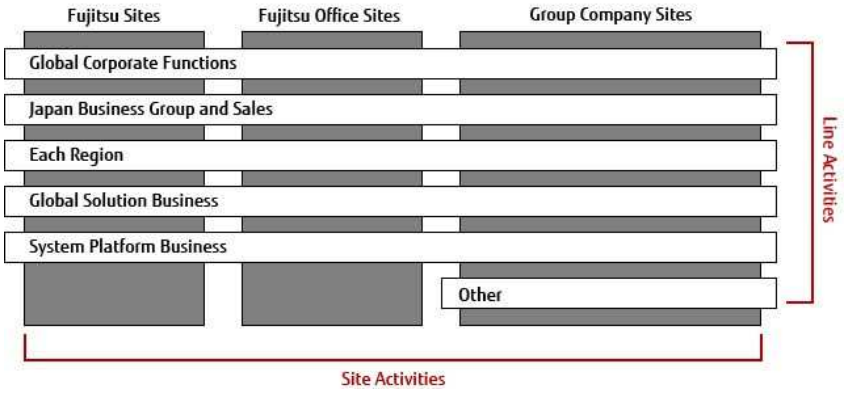
The Sustainability Management Committee reviews and conducts deliberations about the new challenges and activities directions of "environmental initiatives", which related to whole group companies regarding the operational status and achievement of goals with regular report. For example, the committee determines the directions to be taken for reduction of energy consumption and CO_2 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.
Issue-specific Working Groups are sub-organizations set up under the supervision of the Sustainability Management Committee, with the goal of providing dedicated responses to address specific tasks professionally. The tasks of the issue-specific Working Groups are discussing objectives and confirm the progress and promote to achieve for the Environmental Action Plan. The Top Management(Environmental) gives approval and issues directions in response to the progress reports made by the issue-specific Working Groups.



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 divisions 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.

Line/Site Matrix Structure



- Case Studies
  https://www.fujitsu.com/global/about/environment/ems/case-studies/

Environmental Management

Case Studies, Initiatives in Environmental Management

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.

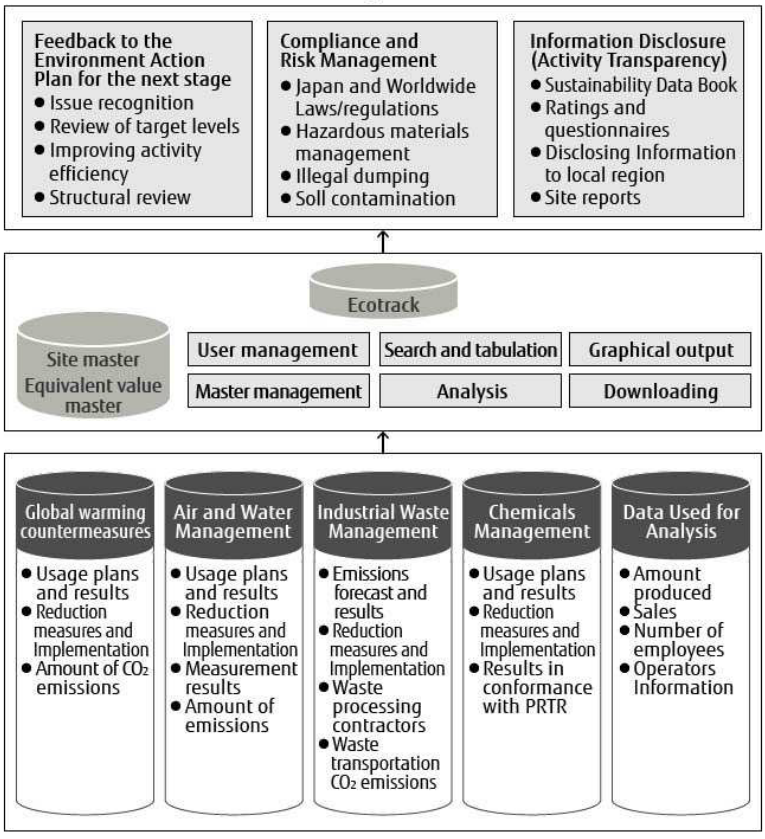
EMS Operations Using ICT

The Fujitsu Group employs its own ICT-driven environmental management tools. Examples include 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. These tools are employed to visualize environmental management and make it more efficient.
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

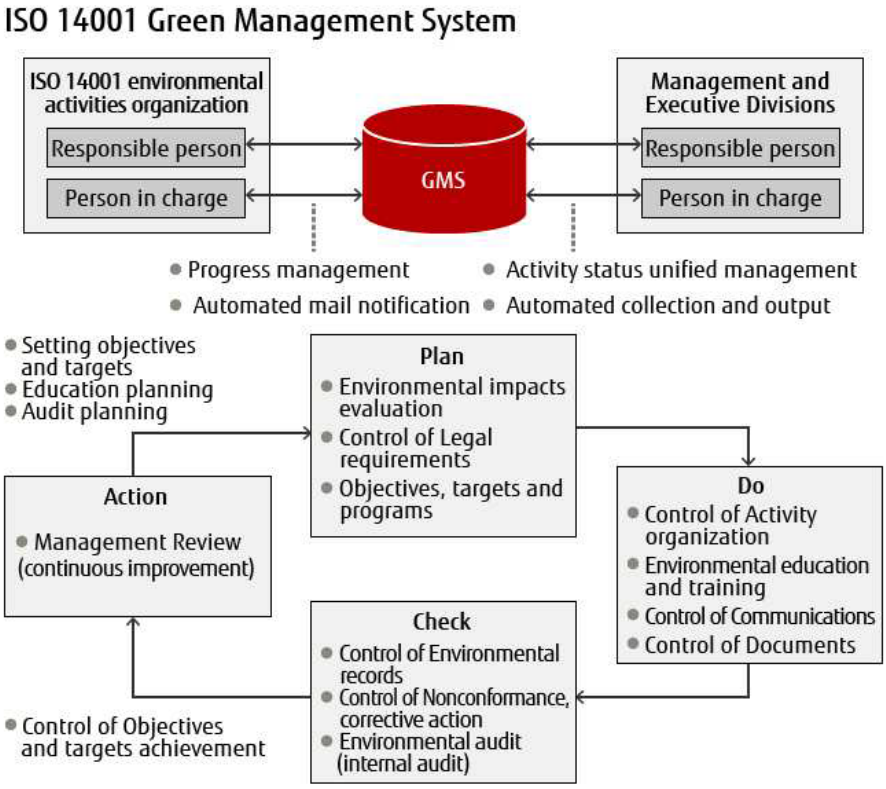
The Global Environment Database System (Ecotrack) is used to gather information about the environmental footprint (performance) of Fujitsu Group companies and business sites and centrally manage aspects such as planning, performance, and policy information.

Global Environment Database System



Using the ISO 14001 Green Management System

The ISO 14001 Green Management System (GMS) is used to exercise unified control over the operational status of the EMS with regard to improvements in and conformance issues relating to findings from internal audits, communications activities, direct and indirect effects identified in environmental impact assessments, and the setting of environmental management objectives and targets.
GMS enables corrective measures and objectives to be certainly managed, and effectively ensures continual improvement of the activities with reduced 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.
In FY 2019, we carried out internal audits of 188 Japanese and 11 overseas business sites, including the factories and offices of Fujitsu and Group companies. When conducting the audits, we scrutinized the results of FY 2018 internal and external audits. The three points emphasized were (1) compliance, (2) operational control, and (3) resources for achieving goals.
There were 30 total findings (both Japan and overseas) of which 23% were related to ISO14001 2015, in addition to other findings such as methods for managing chemical substances and industrial waste. We are receiving cooperation from external experts thoroughly knowledgeable in regulations and operations, and as a result of carrying out internal audits with the aim of improving compliance, the number of findings has been decreasing each year.

External Audits and Results

To maintain our ISO 14001 certification, we are carrying out external audits by a certifying body. In FY 2019, we were audited in Japan by the Japan Audit and Certification Organization for Environment and Quality (JACO). Outside Japan, we were audited by DNV GL Business Assurance Japan K.K.
As a result, there were 36 opportunities for improvement in Japan, and 14 overseas. There were two findings in Japan and four findings overseas, and the corrective actions have been taken. Those were shared throughout the Group in order to help efforts to prevent recurrences.

Number of Findings by Audits

	FY2017	FY2018	FY2019
Number of findings by internal audits	122	102	30
Number of findings by external audits	8	3	6
Number of opportunities for improvement	126	113	50

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 2019.

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
  https://www.fujitsu.com/global/about/csr/riskmanagement/
- Environmental Management System
  https://www.fujitsu.com/global/about/environment/ems/

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.
Furthermore, the implementation of stricter regulations for greenhouse gas emissions and a carbon taxes creates a risk of increasing the energy cost incurred by the Fujitsu Group, as well as the cost required for measures aimed at reducing greenhouse gases. 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. Moreover, based on the FUJITSU Climate and Energy Vision, we are working to achieve net zero CO_2 emissions by 2050 and to contribute to mitigation/adaptation for climate change through business.
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

Policy/ Legal Risks	● Risks: Increase in cost in order to respond to the strengthened laws and regulations on greenhouse gas emissions and energy use, 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.
Technology Risks	● Risk: Unrecovered investments and market share decline in the event that the company lags behind in a fierce competition in technological development toward a carbon-free society. ○ 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.
Market Risks	● 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.
Risks to Reputation	● Risk: Decline in corporate value and an increase in response costs associated with a negative assessment from stakeholders on the response status of measures to counteract climate change. ○ 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

Upstream Supply Chain	● 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.
Downstream Supply Chain	● 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 2019 (Risk-Related Questions)
  https://www.fujitsu.com/global/documents/about/environment/risk/Fujitsu_Limited_CDP_Climate_Change_Questionnaire_2019.pdf

Assessing and Monitoring of Potential Water Risks

In recent years, the supply and demand for water has become strained in many areas around the world due to a variety of factors, such as population growth and climate change, and there is a growing concern that this may become a business risk. The Fujitsu Group conducts assessments of and monitors potential water risks for direct operations sites and supply chains.
In particular, the Group uses tools and databases provided by NGOs and governments at both country and municipal levels to check the status of water stress and the risk of natural disasters in the areas where businesses are located. 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 2019 (Risk-Related Questions)
  https://www.fujitsu.com/global/documents/about/environment/risk/Fujitsu_Limited_CDP_Water_Security_Questionnaire_2019.pdf

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 is 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

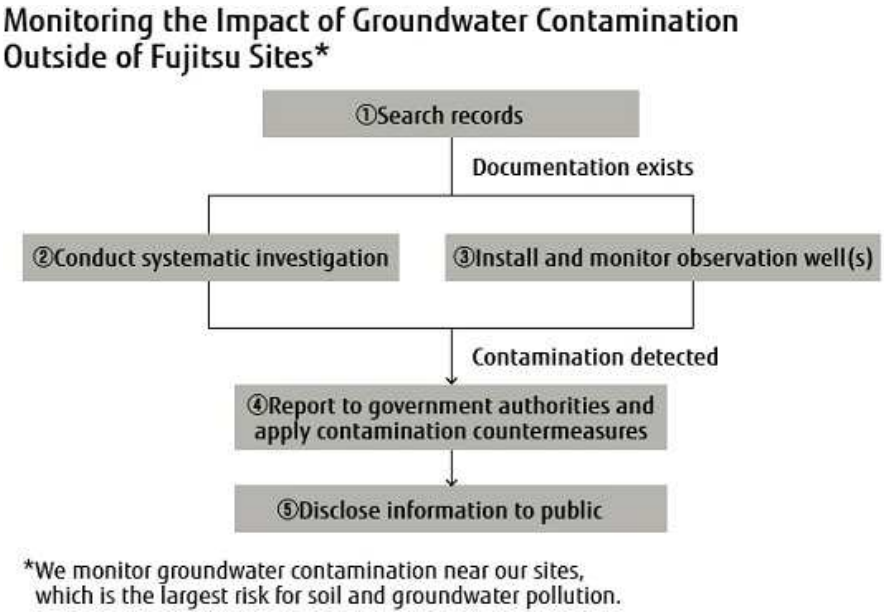
By implementing a precision water-wash system and non-wash soldering technology, we have completely eliminated the use of ozone-depleting substances in manufacturing processes (parts washing and solvents). We have also implemented leakage countermeasures for refrigerant chlorofluorocarbons used in air conditioning facilities (freezers, etc.), and are switching to non-chlorofluorocarbon gas when updating facilities.

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 2019, there are three 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.



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	2.7	0.04
			Chloroethylene	5.4	0.002
Oyama Plant	Oyama City, Tochigi Prefecture	We are continuing to clean up VOCs by pumping and aeration.	Tetrachloroethylene	0.014	0.01
			Trichloroethylene	0.597	0.03
			1, 1-dichloroethylene	0.314	0.1
			1, 2-dichloroethylene	3.658	0.04
			Chloroethylene	0.616	0.002
FDK Washizu Plant	Kosai City, Shizuoka Prefecture	We are continuing to clean up VOCs by pumping and aeration.	Cis-1, 2-dichloroethylene	0.45	0.04
			Trichloroethylene	0.18	0.03
			Tetrachloroethylene	0.18	0.01
			Chloroethylene	0.0047	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
  https://www.fujitsu.com/global/about/environment/chemical/

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
  https://www.fujitsu.com/global/about/environment/procurement-policy/

Appropriately Processing Waste

We regularly carry out on-site audits in order to confirm that subcontractors are appropriately handling the waste processing tasks we entrust to them.
In addition, with regard to high concentration polychlorinated biphenyl (PCB) waste (transformers and condensers) processing, we have registered with the Japan Environmental Storage & Safety Corporation (JESCO), which handles temporary storage and disposal of PCB waste under government supervision, and are carefully carrying out processing based on JESCO plans.

Environmental Liabilities

In properly assessing the Fujitsu Group's expected future environmental liabilities, and communicating our integrity and corporate stance of not deferring our environmental liabilities, we have recorded liabilities of 2.77 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 2019, to be necessary for the Fujitsu Group to conduct these tasks domestically in the next fiscal year and beyond.

Conserving Biodiversity

Recognizing that our business activities benefit from the riches of the Earth's biodiversity, while at the same time impacting it, the Fujitsu Group considers the conservation of biodiversity to be an important issue, and formulated the Fujitsu Group Biodiversity Action Principles in October 2009. We promote them based on the two pillars of reducing the impact of our business activities on biodiversity and contributing to the creation of a society that conserves biodiversity, and implement various policies to conserve biodiversity through leveraging ICT and other means.

- **Policy Example 1: Project for Recognizing Blakiston's Fish Owl Vocalizations**
  We offer vocal recognition software used for habitat surveys of Blakiston's fish owls, which are an endangered species. The software helps the surveys to be more efficient by automatically extracting their cries, greatly reducing the time for analysis.

  > Project for Recognizing Blakiston's Fish Owl Vocalizations
  > https://www.fujitsu.com/jp/about/environment/activities/owl//index.html

- **Policy Example 2: Support for the Harapan Rainforest (Forest of Hope)**
  We provided support for reforestation activities in the Harapan Rainforest (Forest of Hope) on the Indonesian island of Sumatra. Through the introduction of ICT, we greatly improved the efficiency of patrols in the forest, contributing to forest conservation.

  > Providing Support for the Harapan Tropical Rainforest (Forest of Hope) (Indonesia)
  > https://www.fujitsu.com/global/documents/about/environment/activities/global/fujitsu_supports_rainforest_conservation_in_indonesia.pdf

- **Policy Example 3: Activities to Make Tsushima, An Island Facing a Severe Plastic Waste Pollution Problem, Greener**
  We conducted eco-tours sponsored by Fujitsu Limited and conducted by Fujitsu Group employees. We also held a coastal cleanup and an ideathon to come up with solutions to local issues.

  > Tsushima, An Island Facing a Severe Plastic Waste Pollution Problem
  > https://www.fujitsu.com/global/about/environment/activities/japan/ecotours/

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 and promotes procurement from business partners that fulfill the green procurement requirements (see below) together with partners in Japan and overseas.
Using the Fujitsu Group Environmental Survey Sheet, we conduct annual monitoring of our business partners' statuses with regard to environmental management systems, CO_2 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 CO_2 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
  https://www.fujitsu.com/global/about/procurement/green/

Green procurement requirements for business partners

Requirements	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

CO_2 Emission Reduction Initiatives

The Fujitsu Group also asks our business partners to work toward CO_2 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.

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 Management

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

All employees undergo environmental e-Learning to facilitate a basic understanding of environmental management. In addition to training for new employees and for managers, 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.

Raising Awareness through an In-House Award Scheme

The Environmental Contribution Award

To raise environmental awareness among employees at all Fujitsu Group companies, we have established an Environmental Contribution Award Scheme to recognize business and activities contributing to the environment. The award scheme is open to all employees and has been implemented every year since 1995. In FY 2019, in addition to the existing Environmental Contribution Award Scheme, we established SDGs Special Prize Scheme and issued a wide-ranging call for activities that contribute to the Sustainable Development Goals (SDGs), which aim to address societal challenges by dealing with environmental issues. We received submissions that covered a diverse array of topics.

- Winner of the FY 2019 The 1st Award (Environmental Contribution Award)
  Combining construction of a system with an uninterruptible power supply that considers reduced CO_2 emissions by adopting fuel cells and BCP measures for major services
  They adopted a fuel cell power generation system capable of reducing CO_2 emissions by approximately 35% at Kumagaya SSC by utilizing clean energy.

Combined with this, they established an uninterruptible power supply by selecting a method that does not rely on the supply infrastructure in the event of a natural disaster, etc. and also constructed BCP measures system for service continuity.

- Japanese only:
  Fuel Cell Power Generation System Introduced at the Kumagaya Service Solution Center
  https://www.fujitsu.com/jp/group/frontech/about/resources/news/press-releases/2020/0129.html

In addition, CO_2 reduction by optimizing transportation schedule using the Digital Annealer also won the same award. Other than The 1st Award, winning entries included contributing to achieving the world's highest level of weather forecasting accuracy through the use of supercomputers, constructing a cloud-based BEMS with users that contributes to energy saving, major electricity savings through world's best technology for accelerating deep learning, constructing a collaboration scheme that encourages companies to collaborate on environmental technologies, a digital rice trading platform with an integrated supply chain solution running on blockchain for sustainable rice exchange, and a chatbot to support COVID-19 infection prevention measures.

In-House Environmental Seminar and Workshop

Believing that the first step toward the realization of a sustainable society is to be aware of social and environmental issues and international trends, we conduct environmental seminars for our employees periodically.

June: Special Lecture “Social & Environmental Issues Resolved by Parking Space Sharing Service”

We invited Genki Kanaya, President & CEO of akippa Inc., which sums its management philosophy up in the word “indispensable” and is active as a problem-solving company, to deliver an in-house lecture. In his remarks, he took up everything from troubles involved in human transport to the congestion and shortage of parking space related to transport and traffic, and further to the accompanying environmental problems. He went on to describe how he started the parking space sharing business, its business models and other factors for the resolution of these issues.

akippa Inc, CEO Kanaya

Communication Through the Internet and Social Media

By disseminating information through the Internet and having lively exchanges of ideas via social media, we encourage employees to think of environmental and societal issues as personal ones.

Spreading Internal Awareness About the Issue of Plastic Waste

In addition to reducing plastic waste through conventional business activities, starting in June 2019, we have worked to reduce the amount of disposable plastic used in offices, and conducted activities to raise employee awareness. We developed campaigns that used the company's internal website and social media, and worked to spread awareness within the company while listening to what many employees had to say.

- In June, we conducted a campaign on our internal website that declared we would use reusable shopping bags with the aim of reducing disposable plastic waste, such as shopping bags. More than 3,000 employees posted messages.
- In December, we established a group for "Sustainable Consumption Activities" on Yammer, our internal SNS, and conducted a campaign for employees to bring their own bottles. By conducting a campaign in conjunction with our efforts to move away from drinks in plastic bottles sold by vending machines at our business sites in Japan, as well as the elimination of plastic straws at company cafeterias, we had lively exchanges of ideas about everyday eco-friendly activities, and how the Group can contribute to environmental and social issues.
- In addition to a report posted on our public website about the eco-tour to Tsushima held in November, which was themed around the issue of marine plastic waste, we posted a video primer on YouTube to explain the problem. Our efforts to raise awareness are not just within the company.

(Links)

- Tsushima, An Island Facing a Severe Plastic Waste Pollution Problem
  https://www.fujitsu.com/global/about/environment/activities/japan/ecotours/
- [Primer] What is the Marine Plastic Waste Problem?
  https://www.youtube.com/watch?v=l0EbmdfhguI

Poster for the reusable shopping bag declaration

Yammer community site,
"Sustainable Consumption Activities"

Medium- to Long-Term Visions and Targets Focused on Climate Change Issues

The Fujitsu Group Medium/Long-term Environmental Vision

FUJITSU Climate and Energy Vision

The Fujitsu Group has established the "FUJITSU Climate and Energy Vision, "a medium- to long-term environmental vision with the goal of bringing the Fujitsu Group's CO_2 emissions to zero by 2050, as well as contributing to the achievement of a decarbonized society and the adaptation to climate change, through provision of technologies and services supporting digital transformation.

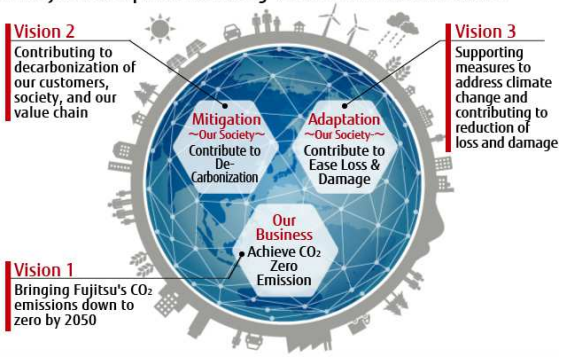
The Importance of Responding to Climate Change

Climate change, which will have a significant long-term impact on countries and regions around the world, is an important issue for us as a global company. Disasters caused by climate change will disrupt procurement, logistics and energy supply networks, making it difficult to procure parts and energy for our business sites. Tighter regulations on greenhouse gas (GHG) emissions will affect our operations, and the ICT products and services we provide to our customers will also need to be made more energy-efficient. If we fail to provide products and services with excellent energy efficiency in response to regulatory and market demands, we could suffer business losses and a decline in our corporate reputation. At the same time, through innovations in AI, IoT, and other advanced technologies, it is a great business opportunity for us to form ecosystems with customers and various stakeholders, contribute to the decarbonization of society–by taking actions such as reducing the power consumption of customers and society and expanding the use of green power–and provide services and solutions which facilitate adaptation to climate change.
The Fujitsu Group considers climate change to be a serious issue (materiality) that must be addressed, and we have been actively working to meet the goals we previously set in our Environmental Action Plan. Furthermore, in order to contribute to addressing the issue as a leading company, we recognized the need for the Fujitsu Group to have a long-term vision and tackle the issue as a united group. We gathered knowledge and engaged in dialogue with various stakeholders through interviews with outside experts and the activities of external organizations. Taking these into account, the Environmental Management Committee*, led by the President, formulated the Fujitsu Climate and Energy Vision, our medium- to long-term environmental vision with regard to climate change, and we made it public in May 2017.

*Its name in 2017. Now the Sustainability Management Committee.

Concept

The Fujitsu Group Medium/Long-term Environmental Vision



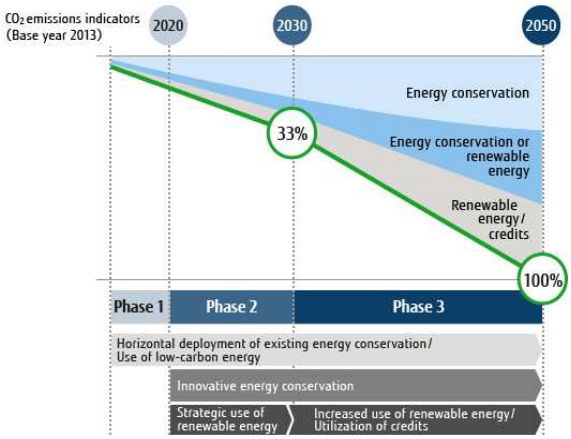
As an international framework of measures against global warming starting in 2020, the Paris Agreement, which sets a goal of limiting the rise in global average temperature to less than 2°C above the average temperature prior to the industrial revolution, came into effect in November 2016. In order to achieve this, the goal to "achieve a balance between emissions and removals of greenhouse gases (GHG) in the second half of this century" has been set, and a shift to a decarbonized society will be necessary beginning in 2050. Various change are taking place in the global market as well, and it is expected that regulations on CO_2 emissions will be tightened, carbon taxes and other carbon pricing will be applied to more countries, and carbon tax will rise sharply. In addition, investment taking into account Environmental, Social and Governance (ESG) factors is expanding, which is also exerting a significant influence on market rules.
This vision has three pillars, namely, "Our Business: Achieve Zero CO_2 Emissions", "Mitigation: Contribute to a Decarbonized

Society" and "Adaptation: Contribute to Measures in Society to Adapt to Climate Change". The Fujitsu Group aims to use ICT effectively to accelerate its own efforts to shift away from carbon, and by providing the knowledge gained from such efforts to customers and society as solutions, leverage its own business activities as a way to mitigate and adapt to climate change.

Note) Paris Agreement: New framework adopted by the 21st Session of the Conference of the Parties to the UN Framework Convention on Climate Change for measures to combat climate change starting in 2020.

Vision1 Achieving Zero CO_2 Emissions in the Fujitsu Group

The Fujitsu Group established a scenario for reducing CO_2 emissions where it would gradually reduce them to zero in three phases by 2050, with its intention to take the initiative as a global ICT company to strive to create a decarbonized society. This scenario has been established with scenarios recommended by the Science Based Targets (SBT) initiatives. It is also consistent with the 2℃ goal (*1). At present, we are conducting reviews of our actions aimed at meeting a target of 1.5℃, based on the Intergovernmental Panel on Climate Change (IPCC) Special Report on Global Warming of 1.5℃ released in October 2018, and changes in certification to the SBT standard of 1.5℃.



The Roadmap to reduce the Fujitsu Group's CO_2 Emissions to Zero by 2050

Phase Ⅰ

In Phase Ⅰ (until 2020), from the perspective of usability and economic efficiency of the technology, in Japan, we will horizontally deploy energy conservation technologies that already exist, verify new energy conservation technologies that use AI, etc. and move forward with the use of low-carbon energy. Overseas, we will proactively implement renewable energy, focusing on the EU.

Phase Ⅱ

In Phase Ⅱ (until 2030), the Fujitsu Group will work to establish and spread a transition to AI and ZEB (*2), etc. to accelerate the reduction of emissions. Further, we will expand strategic implementation of renewable energy, which is expected to be easier to use in Japan as well, with consideration given to local characteristic and economic efficiency.

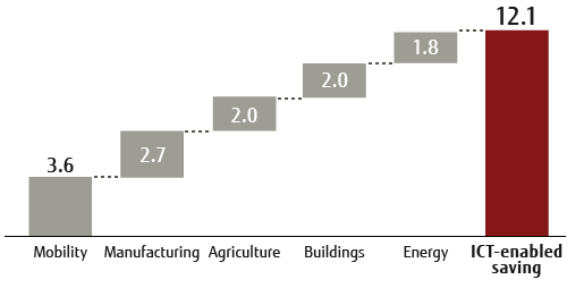
Phase Ⅲ

In Phase Ⅲ (2030 and after), we will accelerate implementation of increasingly easy-to-use renewable energy, while supplementing with offsets from carbon credits, with an eye towards deploying and deepening innovative energy conservation technologies and shifting away from carbon.
The Fujitsu Group intends to increase the use of renewable energy in the electricity consumed at Fujitsu Group locations to at least 40% by 2030 and to 100% by 2050 with the membership gained in July 2018 to RE100. RE100 is a collaborative initiative led by The Climate Group in partnership with CDP, for companies committed to source 100% of the electricity they use from renewable sources.

*1 The GHG reduction target, with the Group's carbon credits subtracted, was approved by the SBT initiative.
*2 ZEB: Zero Energy Building. A building with significantly reduced yearly energy consumption achieved through conservation of energy in its structure and facilities, and thorough creation of energy by using solar power generation, etc.

Vision 2 and 3 “Contributing to a Decarbonized Society” and “Contributing to Measures in Society to Adapt to Climate Change”

The Fujitsu Group believes that ICT has the potential to contribute to the mitigation of and adaptation to climate change. To that end, we have established “Mitigation: Contribute to a Decarbonized Society” and “Adaptation: Contribute to Measures in Society to Adapt to Climate Change” as pillars of Fujitsu's medium/long-term environmental vision, and are utilizing advanced ICT to create social innovation that contributes to resolving global environmental issues.



Exhibition:"#SMARTer2030",Global e-Sustainabilitye Initiative

Vision 2 Contributing to a Decarbonized 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 point of mitigation measures is the utilization of AI and other advanced digital technologies to maximize energy efficiency. We will achieve optimal usage of energy for the overall societal system by incorporating those technologies into a mechanism that crosses the boundaries between businesses, industries, and regions.

Vision 3 Contributing to Measures in Society to Adapt to Climate Change

The key point of measures to adapt to the impact of climate change is advanced measuring technology using AI, big data, and simulations through sensing technology and high-performance computing (HPC), etc. Fujitsu will utilize these to create solutions to enable creation of a resilient societal infrastructure and stable supply of agricultural products, as well as solutions to minimize food product loss, thereby contributing to the minimization of damage to our customers and society caused by climate change.

Medium- to Long-Term Visions and Targets Focused on Climate Change Issues

Medium- to Long-Term 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.

Approval by Science Based Targets (SBT) Initiative

In August 2017, the reduction targets of greenhouse gas (GHG) emissions from its business facilities and a part of value chain, set by Fujitsu Group, was approved by Science Based Targets (SBT) initiative as being at science based level. The SBT initiative 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 goals for reducing GHG emission based on scientific evidence, in order to limit the global temperature increase to less than 2°C over pre-industrial revolution temperatures.

SCIENCE BASED TARGETS
DRIVING AMBITIOUS CORPORATE CLIMATE ACTION

Targets

- To reduce GHG emissions from our business facilities by 33% by FY 2030 and 80% by FY 2050 in comparison to FY 2013.
- To reduce GHG emissions from our business value chain (purchased goods and services, and the use of sold products) by 30% by FY 2030 in comparison to FY 2013.

Joining RE100 as Japan's First Gold Member

In July 2018, Fujitsu joined RE100, which strives to significantly expand the adoption of renewable energy at a global scale, as Japan's first Gold Member. RE100 is an international initiative led by The Climate Group in partnership with CDP and consists of companies committed to source 100% of the electricity they use from renewable sources.
The Fujitsu Group will consider the appropriate steps for each region and expand its procurement of electricity from renewable sources at locations in Japan and around the world, starting with data centers outside Japan. 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.

Renewable Energy Electricity Usage Goals at Fujitsu Group Locations

- Goal : 100% by 2050
- Intermediate Goal : 40% by 2030

RE100
CLIMATE GROUP | CDP

Medium- to Long-Term Visions and Targets Focused on Climate Change Issues

TCFD-Based Information Disclosure

The Task Force on Climate-Related Financial Disclosures (TCFD) was established by the Financial Stability Board at the request of G20 with the objective to reduce the risk of instability in the financial market due to climate change. The task force announced its recommendations in June 2017 asking companies and organizations to gain understanding of and disclose the risks and opportunities arising from climate change. The Fujitsu Group announced its support for the TCFD recommendations in April 2019 and strives to disclose information in line with the recommendations, including responding to CDP (*1).

*1 CDP:
An international nonprofit organization which offers the only global system for measuring, disclosing, managing and sharing important environmental information of companies and cities. CDP is working together with the world's leading institutional investors to encourage companies to disclose their impact on the environment and natural resources, and to take steps to mitigate that impact.

Item	Response Status	Reference
Governance	Under our system for promoting environmental management, we have established the Sustainability Management Committee chaired by the President. This committee deliberates on medium- and long-term issues, makes policies, shares the risks and opportunities arising from climate change, determines measures to tackle them and manages the progress of these activities. It also reports the results of these activities to the Board of Directors at the meetings of the Management Council. In addition, we analyze and respond to risks faced throughout the Group, including those from climate change, under the supervision of the Board as part of our Group-wide risk management system.	• Sustainability Management in the Fujitsu Group • Environmental Management System • Risk Management
Strategy	Based on the analyses of risks and opportunities arising from climate change in the medium to long term (2030-2050), we have formulated the FUJITSU Climate and Energy Vision, a medium- to long-term environmental vision through 2050. As the world strives for decarbonization, we recognize that any delay in action can lead to risks. Therefore, this vision aims to promote zero CO_2 emissions from our company using ICT and contribute technology services that support digital innovation to build a decarbonized society and cope with climate change, including turning know-how gained into services.	• Medium- to long-term environmental vision
Risk Management	The Fujitsu Group manages risks through committees and management systems. Our risk management system starts with identifying and evaluating risks. We then rank the risks by the frequency of their occurrence and impact level, and the relevant committees determine measures to avoid, mitigate, transfer or accept them as well as check the progress of such measures. Major risks are periodically reported to the Board of Directors.	• Response to Environmental Risks • Environmental Management System • Risk Management
Indicators & Targets	We have formulated the medium- to long-term vision to tackle climate change in the medium to long term, and the Environmental Action Plan for short-term targets. We manage the progress of our strategy by monitoring the indicators set in the vision and action plan.	• Medium- to long-term environmental vision • Fujitsu Group Environmental Action Plan

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 implements 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 seven 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 CO_2 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.
During stages VII and VIII (FY 2013-2018), we clearly demonstrated our intention of using technology to contribute to the resolution of environmental challenges for our customers and society. To further reduce our own environmental footprint, we extended activities to include key partners and the whole supply chain. 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.

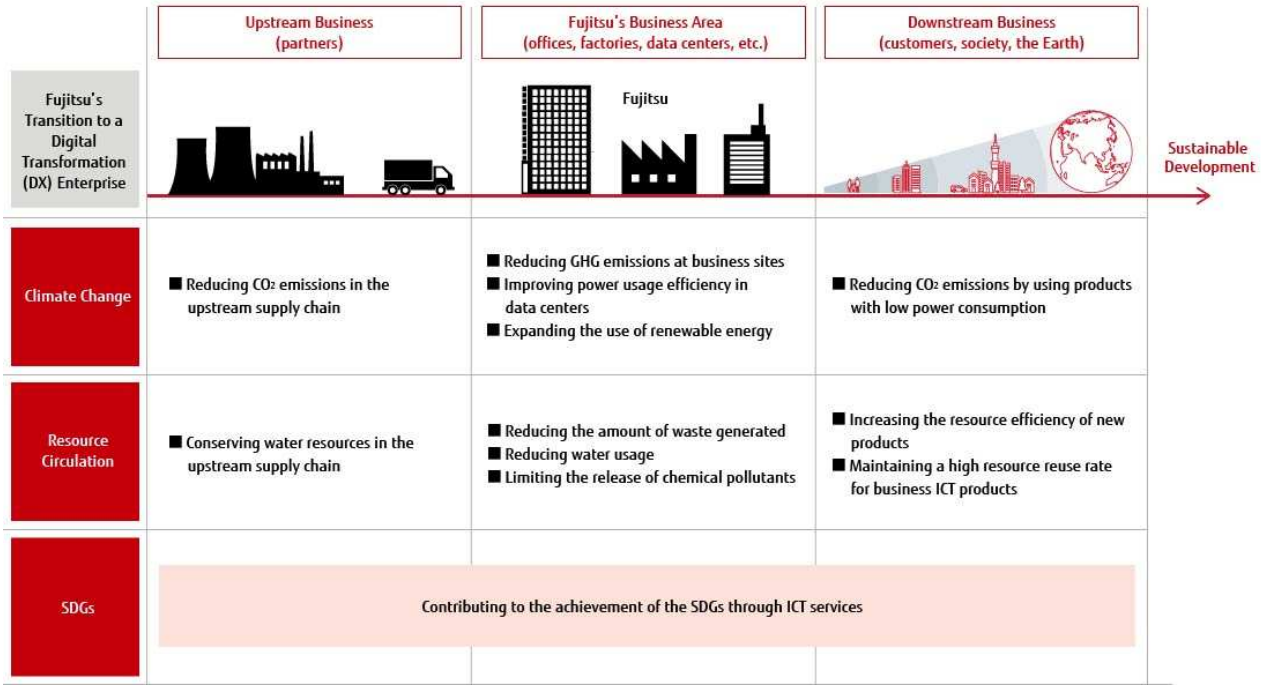
Fujitsu Group Environmental Action Plan (Stage IX)

Aiming for Results with Medium- to Long-Term Targets Focused on Climate Change and Resource Issues

With the goal of achieving a decarbonized society, global initiatives such as Science Based Targets and RE100 are at the forefront of growing calls for reductions in greenhouse gas (GHG) emissions and greater use of renewable energy. In addition, restrictions on importing waste plastics by some Asian nations and the problem of marine plastic pollution have made the management of plastic waste an international issue. On a positive note, there is enhanced corporate focus on contributing to the SDGs and heightened expectations of seeing the SDGs incorporated into more business strategies.
In light of this background, the Fujitsu Group formulated Stage IX of its Environmental Action Plan (FY 2019-2020) based on a structure of four critically important categories. To address issues in the supply chain and in three areas of societal challenge, namely climate change, resource circulation and the SDGs, a total of 11 targets were set. These are described in the tables below.
In terms of climate change, for example, we have defined milestones for our targets in the FUJITSU Climate and Energy Vision (*1) and under global initiatives, and we have specified key performance indicators and tasks to achieve those targets. As part of these efforts, we are working to drive improvements in power usage effectiveness and to strategically boost the use of renewable energy in data centers – a sector generally forecast to record significant growth in GHG emissions.
We are focusing our resource circulation efforts on reducing waste linked to plastics used in packaging, while also continuing to cut the volume of waste generated during manufacturing and to work on other initiatives, including conserving and recycling resources in ICT products.
The Fujitsu Group is consolidating activities throughout its supply chain to ensure that the environmental impacts and risks related to climate change and resource conservation are understood and mitigated. We are also continuing to contribute to the achievement of the SDGs through the provision of ICT services.

*1 FUJITSU Climate and Energy Vision – Refer to this website for details:
https://www.fujitsu.com/global/microsite/fujitsu-climate-and-energy-vision/

Environmental Action Plan



Climate Change

Targets (till the end of FY 2020)	Performance in FY 2019
1. Reduce greenhouse gas (GHG) emission from business sites by more than 14% (compared to FY2013). Reduce GHG emission by 2.1% year-on-year through voluntary efforts.	24.7% reduction and 2.4% reduction through voluntary efforts
2. Improve PUE (Power Usage Effectiveness) (*2) of our data centers by 2% or more compared to FY 2017.	1.9% improvement
3. Increase renewable energy usage by more than 20% compared to FY2017.	19.6% increase

*2 PUE (Power Usage Effectiveness): An indicator of the efficiency of electric power usage by the data center. This value is calculated by dividing the data center's total electric power consumption by the electric power consumption of servers and other ICT devices. The closer the value is to 1.0, the higher is the efficiency.

Resource Circulation

Targets (till the end of FY 2020)	Performance in FY 2019
4. Promote eco design for resource saving and circulation and increase resource efficiency of newly developed products by 25% or more (compared to FY 2014).	23.9% increase
5. Reduce amounts of waste generated by an average of more than 5% compared to FY 2012-2014 (Target 14,226t/year or less).	18.0% reduction
6. Maintain over 90% resource reuse rate of business ICT equipment.	91.1% achievement
7. Reduce total water usage by 1% compared to FY2017.	0.9% reduction
8. Limit the release of chemical pollutants (PRTR) to less than the average of FY 2012-2014 (Target 17.4t/year or less).	8.7 tons

Supply Chain

Targets (till the end of FY 2020)	Performance in FY 2019
9. Reduce CO_2 emission due to power consumption during product usage by more than 14% (compared to FY2013).	23% reduction
10. Drive activities to reduce CO_2 emissions and conserve water resources in the upstream supply chain.	• Reducing CO_2 emissions: Requests to implement reduction activities were relayed via the Fujitsu Group's key partners (approximately 750 companies) to secondary partners (more than 57,000 companies). • Conserving water resources: Completed requests to the Fujitsu Group's key partners (approximately 750 companies) to undertake activities.

SDGs

Targets (till the end of FY 2020)	Performance in FY 2019
11. Contribute to the achievement of SDGs through ICT services.	• Internal staff initiatives: Held 28 presentations, workshops, etc. • External business promotion initiatives: Held 27 presentations, events, etc.

Environmental Action Plan

Climate Change

External Trends

Cutting GHG Emissions to Ensure a Global Temperature Rise of Less than 2°C

The Paris Agreement, adopted in December 2015, set out a long-term, shared worldwide goal of limiting the average global temperature increase to less than 2°C over pre-Industrial Revolution temperatures (hereafter referred to as the 2°C target), as well as the goal of carbon neutrality (zero real emissions) by the second half of this century. Correspondingly, moves aimed at achieving a decarbonized society have been 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 climate scenarios such as the 2°C target 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 Science Based Targets (SBT), which calls for corporate emissions reduction goals designed to meet the 2°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's Position

GHG 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 IX)

Focusing on Enhancing Data Center Efficiency and Expanding the Use of Renewable Energy

Fujitsu joined and registered for SBT and RE 100 relatively early compared to other companies in Japan. We specified our medium- to long-term targets with SBT as “to reduce GHG emissions from our business sites by 33% by FY 2030 and 80% by FY 2050 in comparison to FY 2013”, and with RE100 as “to set a target to source 100% renewable electricity by 2050, with an interim target of 40% by 2030. In the Fujitsu Group Environmental Action Plan (Stage IX), we have set targets and measures based on these medium- to long-term targets.
The Fujitsu Group Environmental Action Plan (Stage IX) stipulates that we will “reduce greenhouse gas (GHG) emission from business sites by more than 14% (compared to FY2013) and reduce GHG emission by 2.1% year-on-year through voluntary efforts”. During the past two years, our voluntary efforts have led to GHG emission reductions in excess of 2.1% over the previous year. However, this improvement is primarily due to gains at specific facilities. To continue this positive trend it is crucial to enhance the power usage effectiveness (PUE) at data centers and to expand the use of renewable energy. In addition to conventional approaches for local cooling using aisle capping, we plan to further reduce power consumption in our data centers by boosting the efficiency of air conditioning equipment through the AI-controlled introduction of external air. Furthermore, we will deploy real-time visualization of the biased heat distribution in our data centers, not only in Japan but also elsewhere, and ensure appropriate heat distribution by optimizing the temperature of air supplied from the air conditioners and by adjusting fan speeds. In terms of renewable energy, Fujitsu intends to boost purchases of 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.

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 CO_2 emissions from our business activities by 2050.
Among GHGs, our business sites (plants and offices, as well as datacenters) primarily emit CO_2 when energy (electricity, fuel oil, gas) is used, and perfluorocarbons (PFCs), hydrofluorocarbons (HFCs), sulfur hexafluoride (SF_6) and nitrogen trifluoride (NF_3) during the semiconductor manufacturing processes. We are striving to decrease and control the volume of emission of these gases by complying with relevant laws and setting reduction targets.

Reducing CO_2 Emitted During Energy Consumption

About 90% of the Fujitsu Group's total GHG emissions arise from CO_2 emissions due to energy consumption. Therefore, we continuously promote the following energy-saving measures to reduce CO_2 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
- Measuring energy consumption for visualization and promoting use of the data so collected

Reducing Emission of GHGs Other Than CO_2

As for GHGs other than CO_2, the Fujitsu Group mainly uses perfluorocarbons (PFCs), hydrofluorocarbons (HFCs), sulfur hexafluoride (SF_6) and nitrogen trifluoride (NF_3) at the semiconductor 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.

FY 2019 Performance

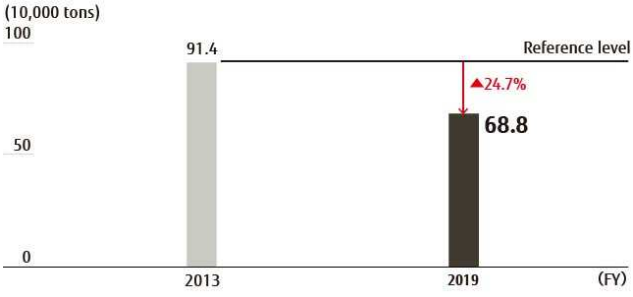
Targets under the Fujitsu Group Environmental Action Plan (Stage IX)	FY 2019 Performance
Reduce GHG emissions of our business sites by 14% or more (compared to FY 2013) (*1)	Reduction by 24.7% (*2)
Through our own efforts, reduce GHG emissions by 2.1% or more compared to last FY	Reduction by 2.4%

*1 Boundary : Business sites owned by Fujitsu and Fujitsu Group excluded MIFS※, and major data centers.
※ MIFS : Abbreviation of "MIE FUJITSU SEMICONDUCTOR LIMITED" (Currently "United Semiconductor Japan Co., Ltd.")
*2 Reduction rate based on market standards

Promoting Reduction in CO_2 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.

Environmental Action Plan (Stage IX) GHG Emissions Reductions



For instance, we improved facility operations (2,180 tons) at the Tatebayashi System Center by controlling the number of air conditioners, reviewing their operation, suspending operation of pumps and cooling devices, and taking other measures. Through our own efforts, we carried out measures to reduce our emissions by roughly 22,000 tons (2.4% 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 IX), by 24.7% in comparison to our emissions in FY 2013.

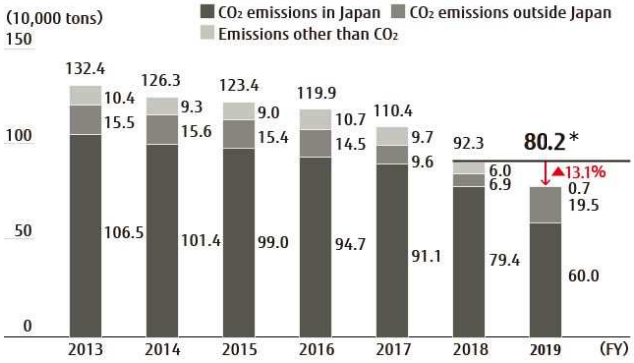
*3 BAT (Best Available Technologies): Usable state-of-the-art technologies to reduce GHGs.

*4 Environmental Action Plan (Stage IX) performance values for the reference year (FY 2013) and FY 2019 are the total values for business sites targeted by the Environmental Action Plan (Stage IX).

*5 CO_2 conversion factors of purchased electricity are market standards in keeping with SBT for both the reference year (FY 2013) and FY 2019 performance values.

Total Emissions of 802 thousand tons in FY 2019

Trends in Total Greenhouse Gas Emissions



* Indicator assured by third party

Our total GHG emissions in FY 2019 were 802 thousand tons* (output level per sales amount: 20.6 tons/100 million yen). They increased overseas due to boundary changes (additions of DC with management authority), but decreased by 13.1% in comparison to FY 2018 for reasons such as the business transfer of our semiconductor division.

*6 CO_2 emissions in Japan and overseas: The CO_2 conversion factor for purchased electric power in performance reports has been calculated with a fixed value of 0.570 tons-CO_2/MWh from FY 2013 to FY 2015, 0.534 tons-CO_2/MWh for FY 2016, 0.518 tons-CO_2/MWh for FY 2017, 0.497 tons-CO_2/MWh for FY 2018, and 0.461 tons-CO_2/MWh domestically and the latest IEA values overseas (by country) for FY 2019

*7 Emissions other than CO_2: These are converted to equivalent amounts of CO_2 using the global warming potential (GWP) for each gas.

Examples of Initiatives in FY 2019

Fuel Cell Power Generation System Introduced at the Kumagaya Service Solution Center

Fujitsu Frontech Co., Ltd. introduced and began the use of solid oxide fuel cells (SOFC), an environmentally friendly power generation system, at the Kumagaya Service Solution Center (Kumagaya City, Saitama Prefecture; hereafter, Kumagaya SSC). It is the first domestic example of fuel cells being introduced in the Fujitsu Group in japan.
The Kumagaya SSC provides services that require 24/7 operation, including outsourcing services for financial institutions and help desk services for distribution centers. As a result of examining the compatibility between BCP measures for major services and an environmentally friendly power supply, Fujitsu Frontech Co., Ltd. introduced Bloom Energy Japan, Limited's fuel cell power generation system, which makes it possible to secure a stable power supply even in the event of power supply interruptions due to natural disasters, etc., and can reduce CO_2 emissions.
By introducing this system, approximately 50% of the electricity consumed by the Kumagaya SSC can be covered by fuel cells, which is expected to reduce CO_2 emissions by approximately 35% per year (in comparison to FY 2018), compared to a situation where all necessary electricity is procured from power companies.
Through the promotion of energy conservation and the use of clean energy, we will continue to reduce CO_2 emissions and contribute to the continued development of the company, as well as the realization of a sustainable society and environment.

The fuel cell power generation system installed at Fujitsu Frontech's Kumagaya SSC

A fuel storage tank

- Press Release (only in Jamanese)
  https://www.fujitsu.com/jp/group/frontech/about/resources/news/press-releases/2020/0129.html
- Case Studies
  https://www.fujitsu.com/global/about/environment/ghg/case-studies/

Environmental Action Plan

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 advances made in digitalization, and society is paying greater attention to the environmental performance of data centers.
Data centers account for approximately 30% of the CO_2 emissions (FY 2019) for each business in the Fujitsu Group, and the annual rate of increase for CO_2 emissions at our 28 main data centers in Japan and around the world has been around 2.0% over the six years from FY 2013 until FY 2019. Since data center CO_2 emissions are expected to continue increasing along with the expansion of digitalization, it is the social responsibility of the Fujitsu Group to work toward having environmentally-friendly data centers. At the same time, it has also become an important topic to look at from a long-term perspective in terms of enhancing our business infrastructure.

FY 2019 Performance

Targets under the Fujitsu Group Environmental Action Plan (Stage IX)	FY 2019 Performance
Improve PUE (*1) at data centers by 2% or more. (Compared to FY 2017)	PUE 1.56 - Improvement of 1.9%

*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. Although some of our activities in the fourth quarter of FY 2019 were restricted due to the global spread of novel coronavirus infections, in view of the impact of recent heat waves, we were able to achieve our goals for FY 2019 by carrying out our planned investments and conducting thorough operational improvements from the first quarter onward. Mainly, we tackled improvements to the cooling efficiency of our air conditioning equipment, carried out additional installations for cold aisle capping, and expanded the areas for AI-controlled air conditioning. We are continuously reducing power consumption by preventing hot spots and fine-tuning the air conditioning. With regard to operational improvements, we surveyed nine items, including the condition of blanking panels and floor hole plugs, and set targets of 80% or more for the implementation of each measure. Overall, we successfully achieved about 90%. Furthermore, we are also working to expand our use of renewable energies, with the aim of achieving RE100 (*2) in tandem with our energy conservation activities.

*2 RE100:
An international initiative which aims for 100% of power usage to be derived from renewable energy. The Climate Group, an NGO, operates the RE100 in partnership with the CDP.

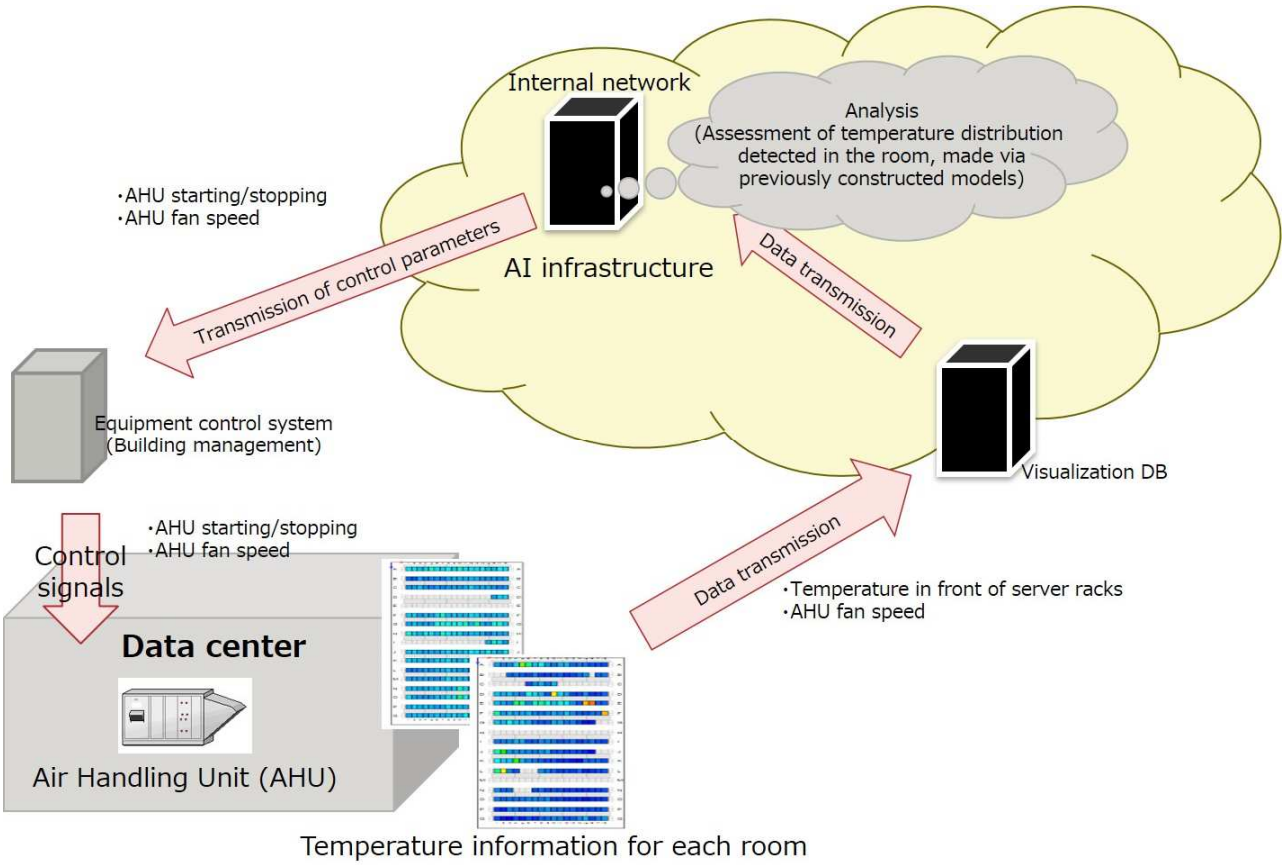
PUE values and calculation methods

PUE Value	PUE calculation method, other
Range: 1.30 to 2.11 No. of data centers: 28	• Apply the Green Grid • Work to implement improvements using DCMM DCMM: Data Center Maturity Model

Examples of Initiatives in FY 2019

Making Energy Use for Cooling More Efficient Through AI-Controlled Air Conditioning

As a result of verifying the effectiveness of algorithms for optimizing air conditioning controls with regard to changes in IT load in server rooms at one major data center in Japan since FY 2018, we successfully developed the optimal machine learning algorithm. We began full-scale operations in the first half of FY 2019, and approximately 60% of all server rooms were covered by AI controls by the end of FY 2019. We reduced the overall energy used for air conditioning by 15-20%, and we plan to continue to roll out the algorithm to include other data centers in the future.



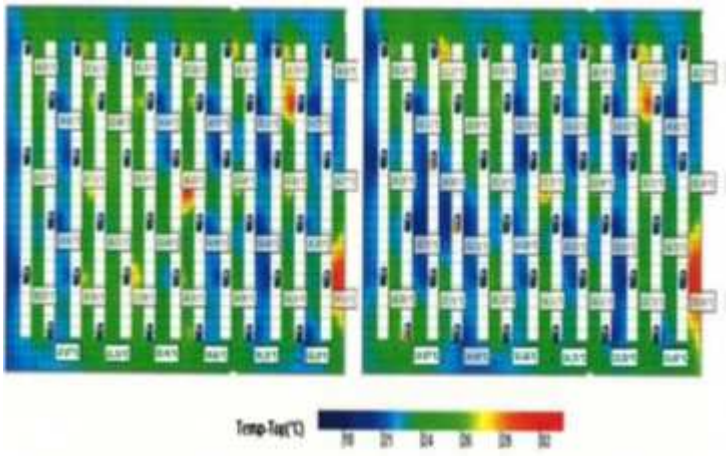
Making Energy Use for Air Conditioning More Efficient Through Operational Improvements (Initiatives with Measures That Were Implemented at 80% or More)

We implemented fine-tuning of air handling units and countermeasures for hot spots (e.g., aisle capping and installation of blanking panels) both in Japan and overseas, and made significant contributions toward achieving the PUE improvement goals for FY 2019.

- Examples of Improvements Being Implemented (Australia)
- Optimizing Server Rooms Through Adjustments to Cooling Temperature and Fan Speed

Through the visualization of environmental data and an energy conservation tool (EMOS (*3)), we have greatly reduced the amount of time necessary to analyze points for improvement, such as hot spots, and optimized server rooms. We also carried out additional installations for cold aisle capping at two other data centers, using similar diagnostics.

*3 EMOS (Environmental Monitoring and Optimization Solution tool)



Visualization of hot spots

Results of adjustments to air handling units (air flow, electricity)

- Examples of improvement measures (UK, Germany, America)
- Improved air conditioning efficiency through additional installations for cold aisle capping and adjustments to the locations of grilles which blow cold air

In conjunction with changing the locations where racks were installed by increasing and decreasing ICT equipment, we made energy use for cooling more efficient by changing the locations of grilles which blow cold air at high speed and carrying out installations for cold aisle capping. At data centers in America, together with changing the locations of grilles which blow cold air, we adjusted air flow through variable dampers underneath the floor, and made energy use for cooling more efficient. We have also installed additional blanking panels to further improve efficiency.

Cold aisle capping and blanking panels
Left – Germany Right – UK

America: Location optimization for grilles which blow cold air

Promoting Improvements Through Better Information Sharing with Overseas Data Centers

In order to strengthen our cooperation with overseas data centers, we are doing our best to communicate with them by sharing information via the company's intranet and conducting regular meetings remotely. We plan to take the methods for assessing improvement effects and the knowledge gained at each location, aggregate them into guidelines, then implement them within the Fujitsu Group so that improvements to PUE go more smoothly in the future.

- Case studies
  https://www.fujitsu.com/global/about/environment/pue/case-studies/

Environmental Action Plan

Expand the Use of Renewable Energy

Our Approach

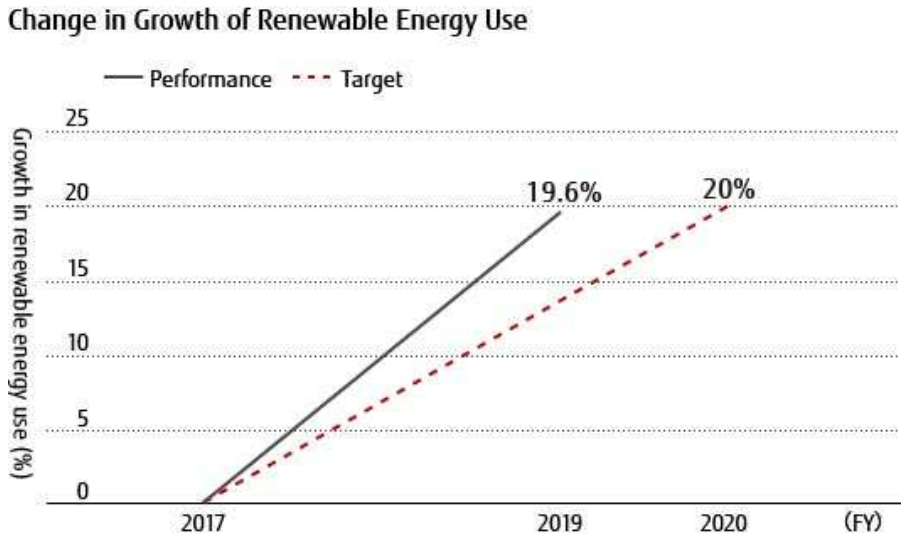
The popularization and widespread use of renewable energy is becoming increasingly necessary as a way of addressing global warming, securing stable energy supplies through the diversification of our energy sources, and as an energy-based foundation for economic growth.
The Fujitsu Group has established 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 2019 Performance

Targets under the Fujitsu Group Environmental Action Plan (Stage IX)	FY 2019 Performance
Expand the amount of renewable energy used by 20% or more in comparison to FY 2017	Renewable energy use grew by 19.6%

Environmental Action Plan (Stage IX) 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 FY 2020 target under the Fujitsu Group Environmental Action Plan (Stage IX) of expanding the amount of renewable energy we use by 20% or more in comparison to FY 2017. In FY 2019, through the purchase of green power and power generation through solar panels, our renewable energy use grew by 19.6% in comparison to FY 2017.
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.



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 2019

Introduction of Solar Panels

At Fujitsu Consulting India (FCI) Private Limited in India, we introduced solar panels with an electric power generation capacity of 350kW, in order to reduce electricity use and control peak electricity. The panels began generating electricity from January 2019.

Exterior of FCI solar panels

- Case studies
  https://www.fujitsu.com/global/about/environment/renewable-energy/case-studies/

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 urged 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 a significant reduction in the volume of pollutants emitted into the air, water, and soil. In December 2015, the European Union (EU) adopted its first Circular Economy Package, which included measures to boost the sustainable use of resources and recycling as well as to stimulate job creation. This was the start of an ongoing EU program of specific policies and actions aimed at reducing environmental impact while also achieving economic growth. Given the global shift from a linear economic system to a circular one, there are expectations that companies will accelerate and broaden their efforts in resource circulation.

The Problem of Plastic Waste

According to a 2018 OECD report, the volume of plastic waste generated globally jumped six-fold between 1980 and 2015 – from about 50 million tons to about 300 million tons – and the increase in plastic use and improper disposal were highlighted as having a serious impact on the environment. It has become widely recognized in recent years that a global response is needed to deal with the problem of marine pollution caused by plastic waste dumped at sea, and countermeasures are being taken. China and various other countries previously accepted plastic waste as a resource but are now imposing import bans or restrictions. These moves have triggered business risks, such as rising treatment costs and difficulties in securing partners to process plastic waste.

Fujitsu'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 continuing to promote the use of recycled plastics in our ICT products, switch from plastic to cardboard packaging materials, and reduce 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 ICT products and from waste generated at business sites. Changes in our business model are resulting in reduced volumes of waste, but we will bolster our efforts to further limit waste and recycle resources in order to make a stronger contribution to a society oriented toward resource circulation.

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

Focusing on Plastic Waste and Contributing to Resource Circulation

Reducing the volume of plastic waste, which accounts for approximately 20% of the total waste generated by the Fujitsu Group, is a key focus in the Fujitsu Group Environmental Action Plan (Stage IX). We plan to promote material recycling and reuse activities involving our suppliers, primarily by targeting plastic packaging materials used with purchased components.
We will further reduce the amount of non-plastic waste that is generated and continue to conserve and recycle the resources used in products. To ensure continuing improvements, the Fujitsu Group will also strictly control the volumes of water and chemical substances both used and emitted, which are environmental issues that companies must address on an ongoing basis.

Environmental Action Plan

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 a priority area, as well as maintenance for the ErP 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 a 3R 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 2019 Performance

Targets under the Fujitsu Group Environmental Action Plan (Stage IX)	FY 2019 Performance
Promote eco design for resource saving and circulation, and increase resource efficiency of newly developed products by 20% or more (compared to FY 2014).	Improved by 23.9%

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 2019, we continued to use our indicators to evaluate products newly developed by Fujitsu(*1), and worked to reduce product part quantities and reduce product size through smaller, thinner, and lighter parts and higher-density mountings.

*1 Products newly developed by Fujitsu: Excludes products for which resource efficiency is determined by customer specifications or standards.

Achieved 23.9% Improvement in Resource Efficiency

By reducing the size and weight of our PCs, smartphones, mission critical x86 servers, POS tenant devices, and mobile phone radio base stations, and more, we were able to achieve an improvement in resource efficiency of 23.9%, against the 20% target value we set for FY 2019 in the Fujitsu Group Environmental Action Plan (Stage IX).

Working Toward Our Targets

To improve new product resource efficiency by at least 15%, 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.

$$\text{Resource efficiency} = \frac{\text{Product value}}{\text{Environmental burden from resource usage} + \text{Environmental burden from resource disposal}}$$

$$\text{Environmental burden from resource usage} = \Sigma(\text{Resource burden coefficient} \times \text{Resource usage volume})$$

$$\text{Environmental burden from resource disposal} = \Sigma(\text{Resource burden coefficient} \times \text{Resource disposal volume})$$

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 2019

Working to Cut Down on Disposable Plastic at Business Sites and Offices

As the issue of plastic waste becomes more serious as an environmental and social problem worldwide, the Fujitsu Group has worked up to this point to cut down on the amount of plastic used in our business activities globally through measures such as reducing the material used in products and packaging, as well as reducing waste generation at business sites. Furthermore, in recent years, we have also been working to cut down on the use of disposable plastic in offices.

Domestically, in June 2019, we stopped offering plastic bags at our company convenience stores and shops, as well as plastic straws at our company cafés and visitor areas. With the cooperation of drink vendors and vending machine dealers, we withdrew drinks in plastic bottles and switched over to canned drinks, etc., at approximately 1,500 vending machines in the Group.

As a responsible business enterprise, it is essential for us that each and every one of the Fujitsu Group's approximately 130,000 employees takes an interest in environmental and social issues, and works to change their own behavior. In the future, we will continue to promote reduced use of disposable plastic, as well as other sustainable activities to reduce waste, such as carrying around bags and bottles for personal use, with the aim of fostering a corporate culture that contributes to the creation of an abundant and sustainable society.

RELATED INFORMATION

- Environmental Education and Awareness-Raising Activities for Employees
  https://www.fujitsu.com/global/about/environment/education/
- Video Primer About the Issue of Plastic Waste in the Ocean
  https://www.youtube.com/watch?v=l0EbmdfhguI
- Tsushima, an Island with a Serious Plastic Waste Pollution Problem (Tsushima Eco Tour)
  https://www.fujitsu.com//global/about/environment/activities/japan/ecotours/

- Case studies
  https://www.fujitsu.com/global/about/environment/energy-efficiency/case-studies/

Environmental Action Plan

Limiting the Amount of Waste Generated

Our Approach

The Fujitsu Group considers wastes as valuable resources and has continued to work toward recovering resources from its waste or using the waste as a source of energy. In Japan, our volume of final waste disposal has been decreasing every year. However, the environment surrounding waste disposal remains challenging as building new disposal sites is difficult and the existing ones have limited lifespans.
We are actively working to install new equipment and reuse waste with the objective to reduce the amounts of waste acid, waste alkali and sludge generated in the production of semiconductors and printed circuit boards. These efforts are in line with Japan's Fundamental Law for Establishing a Sound Material-Cycle Society to (1) reduce waste generated, (2) reuse it, (3) recycle it and (4) recover heat from it.
We have also established the company-wide Standards for Consignment of Waste Disposal to properly dispose waste, based on the Waste Management and Public Cleansing Law.

On-site Audits for Outsourcing Contractors

We conclude contracts with waste processing companies. These contracts are common for the whole Fujitsu Group. We conduct on-site audits of the waste processing companies with which we have contracts to periodically confirm that waste is being appropriately processed. If multiple business sites have contracts with the same processing company, then a representative business site conducts on-site audits based on the representative auditing regulations. In other cases, each business site individually conducts audits to confirm that waste processing is appropriate.

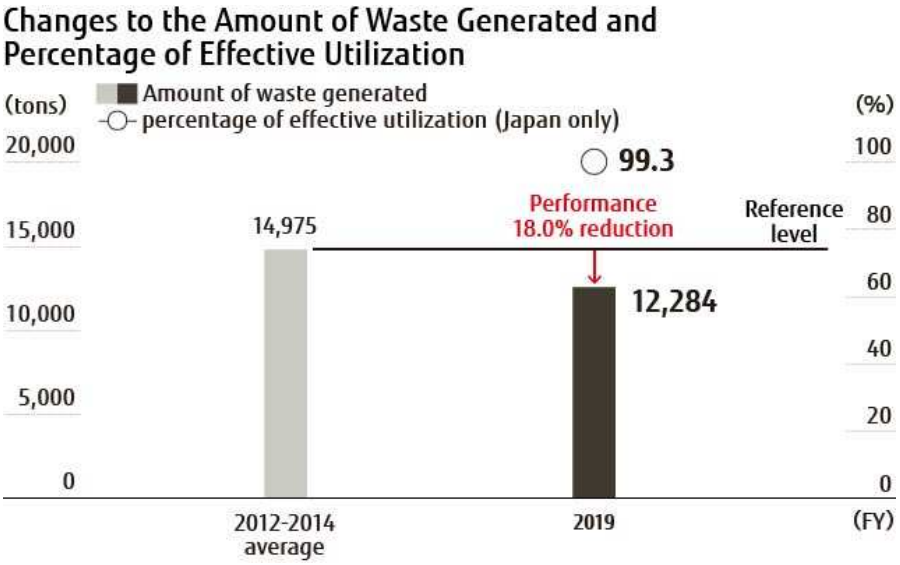
FY 2019 Performance

Targets under the Fujitsu Group Environmental Action Plan (Stage IX)	FY 2019 Performance
Reduce the amount of waste generated by 5% or more of the average amount generated from FY 2012 to FY 2014 (Target 14,226t/year or less) (*1)	18.0% reduction

*1 Boundary : Fujitsu and Fujitsu Group manufacturing sites excluded MIFS

Promoting Measures to Reduce Waste Generation and Plastic Waste

At Shinko Electric Industry Co., Ltd., we reduced the amount of waste generated by 40 tons by changing equipment in some exposure processes to reduce the amount of masks. In addition, starting in January 2020, Fujitsu I-Network Systems Ltd. reduced the amount of waste it generated by 1.5 tons by taking parts reels, which had previously been waste material, and converting them into valuable resources. Such efforts have enabled us to achieve our target by reducing the amount of waste generated to 12,284 tons (generation rate/sales revenue: 0.32 tons/100 million yen).
In accordance with China's ban on importing waste plastic which went into effect in 2018, we have begun collaborating with external reuse companies to partially reuse parts trays used at the time of delivery of procured parts, as a new measure to reduce the amount of waste plastic we generate.



Waste Generated, Effective Use, and Final Disposal (in tons)

Type of Waste	Waste Generated	Effective Use	Final Disposal
Sludge	1,414	1,358	56
Waste oil	813	798	15
Waste acid	720	719	1
Waste alkali	2,365	2,249	116
Waste plastic	2,659	2,612	48
Waste wood	991	949	42
Waste metal	461	461	0
Glass/ceramic waste	189	186	3
Other(*2)	2,672	2,478	194
Total	12,284	11,810	474

*2 Other includes general waste, wastepaper, septic tank sludge, cinders, rubble, textile waste, animal and plant residue, and infectious waste.

Environmental Action Plan

Product Recycling

Our Approach

The Fujitsu Group's product recycling programs are based on Extended Producer Responsibility (EPR) and Individual Producer Responsibility (IPR). EPR holds that producers bear responsibility for products, from design and manufacturing to disposal and recycling. IPR holds that producers bear responsibility for their own products. IPR in particular has been a major challenge for the Fujitsu Group as we expand our business globally. However, we believe that responding to this challenge, and that of EPR, in collaboration with industry associations and governments, will allow us to help create a recycling-minded society that meets the requirements and demands of all stakeholders.
The Fujitsu Group thus carries out recycling programs that comply with the laws and regulations of the various countries in which it operates. In Japan, Fujitsu is certified under the Industrial Waste National Permit System, which is based on the Act on the Promotion of Effective Utilization of Resources, and as such, accepts industrial waste and puts them through appropriate processing at Fujitsu recycling centers across Japan. We also try to do as much collection, reuse, and recycling as we can, even in countries where recycling is not obligatory.

FY 2019 Performance

Targets under the Fujitsu Group Environmental Action Plan (Stage IX)	FY 2019 Performance
Maintain over 90% resource reuse rate for business ICT equipment at Fujitsu recycling centers.	Achieved a 91.1% resource reuse rate.

Promoting Recycling of ICT Products

The Fujitsu Group has built a recycling system that covers the entire country of Japan. We have worked steadily to implement Extended Producer Responsibility, providing safe and secure services with high resource reuse rates in order to promote the recycling of ICT products. We have, at the same time, also ensured thorough traceability and security of these processes.

Achieved a 90% or Higher Reuse Rate

We processed 3,210 tons of recycled ICT products (used ICT products for business applications) from corporate customers in Japan, and achieved a resource reuse rate of 91.1%. We have now also collected a total of 58,560 end-of-life PCs from individual customers.

Changes in Resource Reuse Rates of End-of-Life Business ICT Products (Japan)

FY	2016	2017	2018	2019
Resource reuse rate(*1)(%)	92.0	91.5	91.7	91.1
Amount processed (tons)	4,185	3,844	3,436	3,210

*1 Weight percent ratio of recycled parts and materials to end-of-life products.

Changes in Numbers of End-of-Life PCs Collected from Individual Customers (Japan)

FY	2016	2017	2018	2019
End-of-life PCs collected (units)	61,435	59,144	53,481	58,560

- Case studies
  https://www.fujitsu.com/global/about/environment/recycle/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 IX).

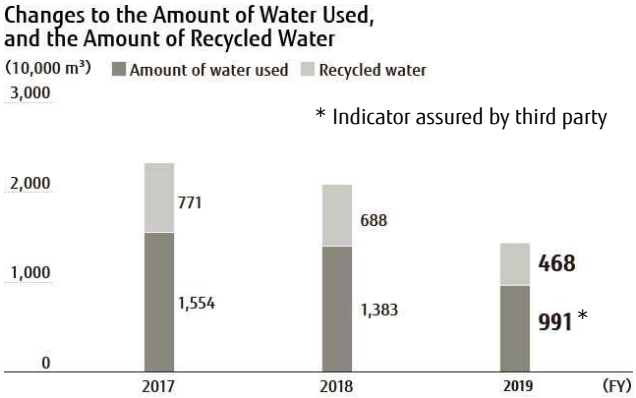
FY 2019 Performance

Targets under the Fujitsu Group Environmental Action Plan (Stage IX)	FY 2019 Performance
Reduce water consumption by 1% in total, compared to FY 2017 (83,000 m^3).(*1)	0.9% reduction compared to FY 2017 (78,000 m^3 reduction)

*1 Boundary : Japan ; Fujitsu and Fujitsu Group offices excluded MIFS and data centers
Overseas ; Fujitsu and Fujitsu Group manufacturing sites

The policies we established in FY 2019 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 reducing the amount of water supplied by introducing high-efficiency compressors, were implemented at each business site, plant, etc., so that we could make more efficient use of our water resources. As a result, in just the first fiscal year, we were able to reduce water use by 78,000 m^3, which already met 94% of the target value for water reduction of 83,000 m^3 that was set in the Fujitsu Group Environmental Action Plan (Stage IX).

9.91 million m^3 of Water Used in FY 2019 (A 28.3% Reduction Compared to the Previous Fiscal Year)



The total amount of water we used in FY 2019 was 9.91 million m^{3*} (output level per sales amount: 256.8 m^3/100 million yen), a 28.3% reduction compared to FY 2018. 4.68 million m^3 of that usage was recycled water, which was a reduction of 32.0% in comparison to FY 2018. Since the total amount of water used has decreased, recycled water makes up 47.3% of our total water usage—a 2.5% decrease from FY 2018.

- Case Studies
  https://www.fujitsu.com/global/about/environment/water-use/case-studies/

Environmental Action Plan

Reducing Chemical Substances Emissions

Our Approach

Here at the Fujitsu Group, we manage approximately 1,300 types of chemical substances, in order to prevent the risks associated with the use of toxic chemical substances (health issues, pollution of the natural environment, etc.).
We operate a chemical information system called "FACE," which we use to register and monitor chemicals at every site, manage Safety Data Sheet (SDS), control income and expenditures using purchasing data and inventory data, and boost our level of management and efficiency with respect to chemical usage.

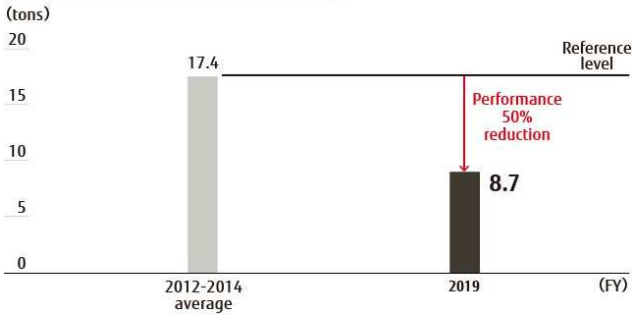
FY 2019 Performance

Targets under the Fujitsu Group Environmental Action Plan (Stage IX)	FY 2019 Performance
Reduce chemical pollutant (PRTR) release to less than the average level of FY 2012-2014 (Target 17.4t/year or less). (*1)	PRTR: 8.7 tons

*1 Boundary : Fujitsu and Fujitsu Group manufacturing sites excluded MIFS
*The sites that handle less than 100 kg of chemical substances per year are excluded.

Achieved Current PRTR Substance Emission Target

Trends in PRTR Substance Emissions



In FY 2019, we were able to limit our Group-wide chemical substance (PRTR) emissions to 8.7 tons, which is under the reference value set in the Environmental Action Plan (Stage IX).

- Case Studies
  https://www.fujitsu.com/global/about/environment/chemical/case-studies/

Environmental Action Plan

Supply Chain

External Trends

Growing Calls for Activities and Reporting across the Entire Supply Chain

Traditionally, companies have been held responsible for measuring and reducing their greenhouse gas (GHG) emissions in two broad areas: Scope 1 (direct emissions: from company factories, offices, etc.) and Scope 2 (indirect emissions at energy sources: from energy consumed by the company, such as electricity). Following the establishment of these standards, the basis of measurement expanded to include Scope 3 (other indirect emissions). This category encompasses all upstream and downstream business activities, such as the procurement, transportation, and usage of products and services. As a result, GHG emission reductions are now expected across the entire supply chain. It is becoming an increasingly common requirement to identify and disclose GHG emissions throughout the supply chain when conducting ESG evaluations for companies and when processing procurement orders for governments and public agencies.
In addition, the TCFD recommendations(*1) call for measures to be taken against risks such as torrential rain and floods triggered by extreme and abnormal weather related to climate change. There are also growing calls to respond to and disclose potential risks faced not only by companies themselves but also by partners in their upstream supply chains.

*1 TCFD recommendations：The Task Force on Climate-related Financial Disclosures (TCFD) issued a Recommendations Report in June 2017. The Financial Stability Board established the TCFD at the request of the Group of Twenty (G20) to reduce the risk of financial market instability linked to climate change. The report includes recommendations for companies and organizations to voluntarily identify and disclose information related to risks and opportunities posed by climate change.

Fujitsu's Position

Management of the Upstream and Downstream Supply Chain is Critical

When considering the lifecycle of Fujitsu's business activities, approximately 90% of the Fujitsu Group's total GHG emissions are accounted for under Scope 3. Within Scope 3, the major sources of emissions are "purchased goods and services" and "use of sold products". These two categories make up around 90% of our Scope 3 emissions, so we set medium- to long-term SBT targets to focus on reductions in these two key areas. In dealing with upstream supply chains, Fujitsu is not only concerned with reducing CO_2 emissions but also investigates the implementation status of water risk assessments by partners, from the viewpoint of business continuity planning. If floods or water shortages impact a partner who manufactures materials or components, it is possible that costs could increase while replacements are sourced, sales opportunities could be lost, and so on.
In terms of downstream supply chains, global data traffic is continuing to increase, with the volume forecast to roughly double from 2018 to 2021, according to the 2019 edition of an annual information and communications white paper published by Japan's Ministry of Internal Affairs and Communications (MIC). In the face of growing demand for data communications, we believe it is critical to develop products with even higher levels of energy efficiency.

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

Promoting Reduction of CO_2 Emissions and Conservation of Water Resources in the Supply Chain

In the Fujitsu Group Environmental Action Plan (Stage IX), we set a target to drive activities to reduce CO_2 emissions and conserve water resources in the upstream supply chain. Regarding reductions in CO_2 emissions, we have boosted our efforts to encourage not only our primary partners, but also our secondary partners through those primary partners, to undertake activities to cut their emissions. Furthermore, we intend to support our partners' emission reduction activities by providing advice on energy conservation and direct assistance based on our own experience in this field. As for challenges regarding water, we believe that appropriate measures are necessary to respond to the specific water risk situations of our partners, and we will work with them to assess and analyze water-related risks. In addition to our in-house initiatives, in FY 2018 we started collecting information and encouraging our partners to reduce CO_2 emissions, mitigate water-related risks, and cut water usage volumes through the internationally standardized methodology of the CDP Supply Chain Program(*2). To address issues in the downstream supply chain, we will pursue the development of advanced energy-saving technologies to create products with lower power consumption requirements than in the past

*2 CDP Supply Chain Program: One element of CDP's services, this program requests companies and government-designated suppliers to respond to a questionnaire on environmental impacts in three areas – climate change countermeasures, water resource conservation, and forest preservation – and feedback is provided on the results.

Environmental Action Plan

Reducing CO_2 Emissions Through Products That Consume Less Power When in Use

Our Approach

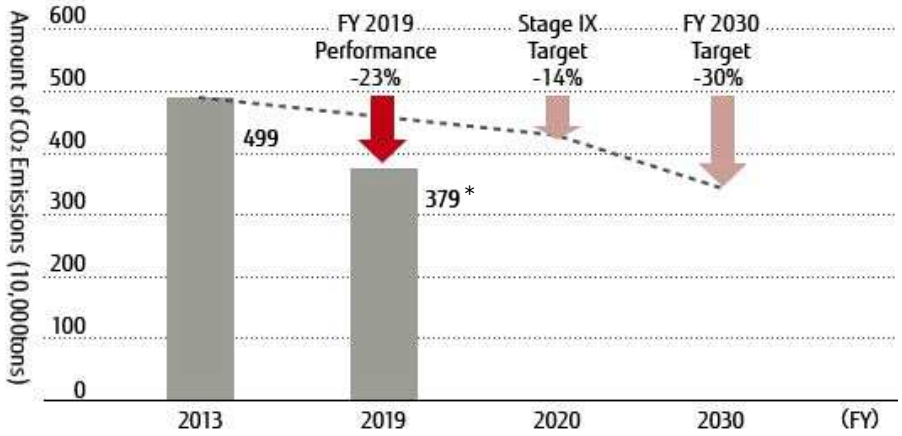
As ICT grows more and more common, we expect there to be an increase in energy demand in proportion to the higher performance and higher-density integration of servers and other ICT products. Various countries and regions are also expanding their energy-related regulations for ICT products, and energy 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 2019 Performance

Targets under the Fujitsu Group Environmental Action Plan (Stage IX)	FY 2019 Performance
Reduce CO_2 emissions due to product power consumption by 14% or more in comparison to FY 2013.	Reduced by 23%

Change in CO_2 Emissions Due to Product Power Consumption

* Indicator assured by third party



Fujitsu Group Environmental Action Plan (Stage IX) Initiatives

Based on the Fujitsu Group's medium-term environmental goal of "reducing CO_2 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 IX) to reduce CO_2 emissions due to product power consumption by 14% or more in comparison to FY 2013 in FY 2020, 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 2019 and FY 2020, 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 23% Reduction in CO_2 Emissions in Comparison to FY 2013

In FY 2019, as a result of applying and expanding energy-saving technologies in our servers, PCs, network devices, and imaging devices, we were able to attain a 23% reduction in CO_2 emissions in comparison to FY 2013.

Working Toward Our Targets

In order to achieve the targets set in the Fujitsu Group Environmental Action Plan (Stage IX), 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 allow early product development.

Examples of Initiatives in FY 2019

The UBT-SP FC400, a Service Terminal for Financial Institutions Which is Scalable, Compact, and Energy-Efficient

The UBT-SP FC400 is a control unit that governs all of the service terminals for financial institutions. Equipped with a rich variety of external interfaces, including 13 USB ports, it can be connected to various peripheral devices, such as bankbook printers, slip scanners, and cash-handling devices used at service counters. The structure and design of the system allow it to be installed either vertically or horizontally, and respond flexibly to layout changes due to banks' reviews of their operations.
We select high-quality components that can be used and supplied for a long period of time, and by implementing high reliability and long-term operation, which are features of our financial products, we are contributing to reduced environmental impact by extending the product replacement cycle.
We have also adopted the latest power-saving architecture and reduced the number of cooling fans by optimizing the arrangement of the heat sink fins and the internal structure, and we have reduced power consumption by 15% in comparison to the previous model.

UBT-SP FC400

Furthermore, we preserved scalability through the abundant interfaces, and figured out ways to drastically reduce the number of parts by adopting a single-board design for the internal printed circuit board and aiming to eliminate internal cables. By doing so, we reduced its weight by approximately 19% in comparison to the previous model, and were able to create one of the most compact, lightest products in the series.

- Case studies
  https://www.fujitsu.com/global/about/environment/energy-efficiency/case-studies/

Environmental Action Plan

Activities to Reduce CO_2 Emissions and Conserve Water Resources in the Upstream Portion of the Supply Chain

Our Approach

In addition to reducing our own emissions, as a green procurement initiative, the Fujitsu Group has also been requesting its suppliers to act toward reducing their own CO_2 emissions in order to help contain global warming. As a result, all of our primary suppliers have undertaken efforts to reduce their CO_2 emissions.
Starting in FY 2016, we have also been expanding these efforts further upstream in the supply chain by including efforts by the suppliers of those companies (secondary suppliers from the perspective of the Fujitsu Group) in our requests.
In FY 2019, in addition to the reduction of CO_2 emissions, we positioned conservation of water resources as a key theme that we needed to ask our suppliers to address. We promoted the implementation of water risk assessments as the first step in our water resource conservation activities by reviewing the questions posed on our environmental survey forms in order to understand the status of activities and the actual conditions of our suppliers.
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 CO_2 emissions and conserve water resources, and considering the issues and our policies.
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 future society and a sustainable water environment.

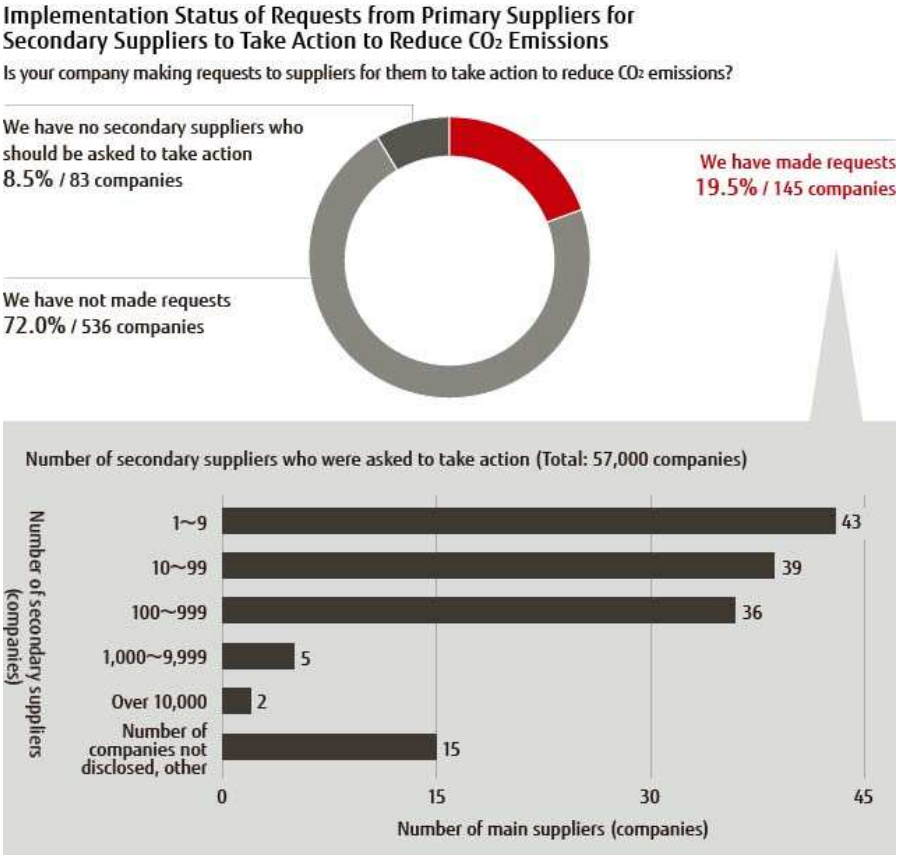
FY 2019 Performance

Targets under the Fujitsu Group Environmental Action Plan (Stage IX)	FY 2019 Performance
Reduction of CO_2 Emissions: Drive Activities to Reduce CO_2 Emissions in the Supply Chain	Made requests for secondary suppliers (over 57,000 companies) to take action on reducing emissions through primary suppliers of the Fujitsu Group (approximately 750 companies)
Conservation of Water Resources: Issue Requests for Primary Suppliers to Take Action	Completed making requests to take action to approximately 750 of the Fujitsu Group's primary suppliers

Reduction of CO_2 Emissions: Requesting and Supporting the Expansion of Activities to Secondary Suppliers

The Fujitsu Group communicated requests to its primary suppliers who account for the top 80% of the Group's procurement volume to engage in activities to reduce their CO_2 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 activity status of these suppliers. As a reference for their future activities, we then provided suppliers who responded to the survey with feedback in the form of a report that analyzed survey responses to show trends in emissions reduction activities, while also requesting further activities and expansion to the activities of their own suppliers.

As of the end of FY 2019, 145 suppliers (roughly 20%) responded that they had requested their own suppliers to engage in emissions reduction activities, but this still amounted to a total of at least 57,000 secondary suppliers receiving such requests, giving reason to believe these efforts can have a tremendous awareness effect.

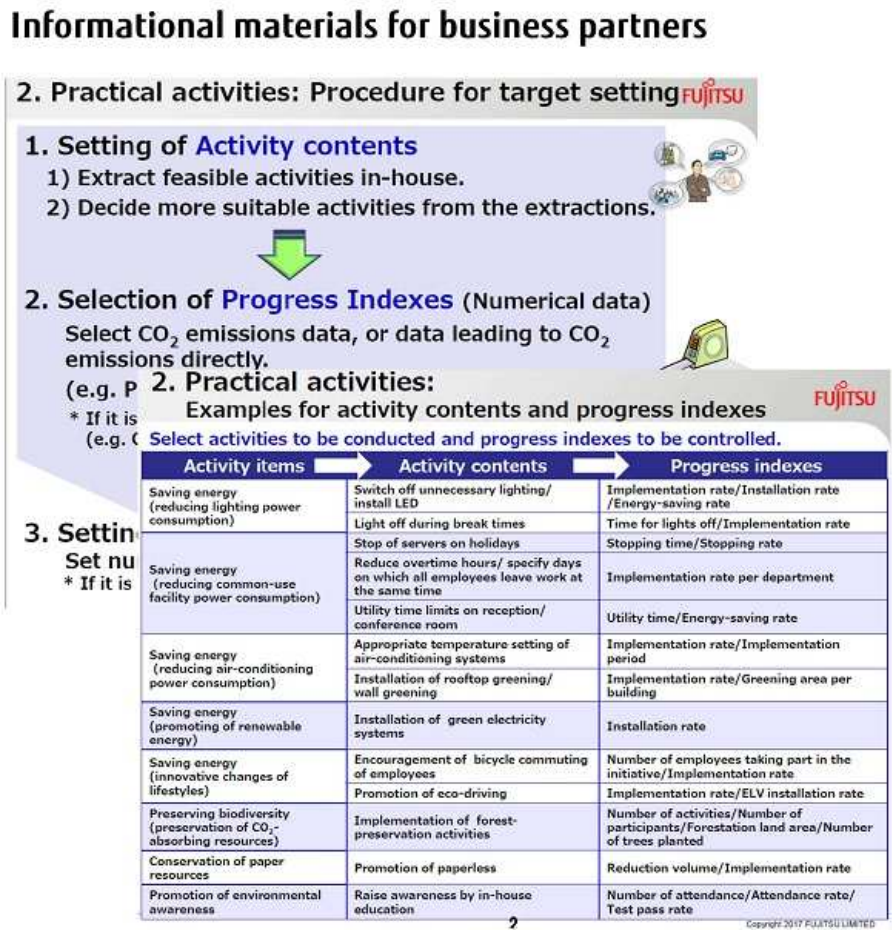


Offering Guidelines for Activities for Reducing CO_2 Emissions

In order to facilitate the spread of CO_2 emissions reduction activities throughout the entirety of our supply chain, the Fujitsu Group produced an original set of explanatory materials and began providing these 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. The materials have had a strong response, being accessed more than 1,700 times since they were posted on our website at the end of November 2017. 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.

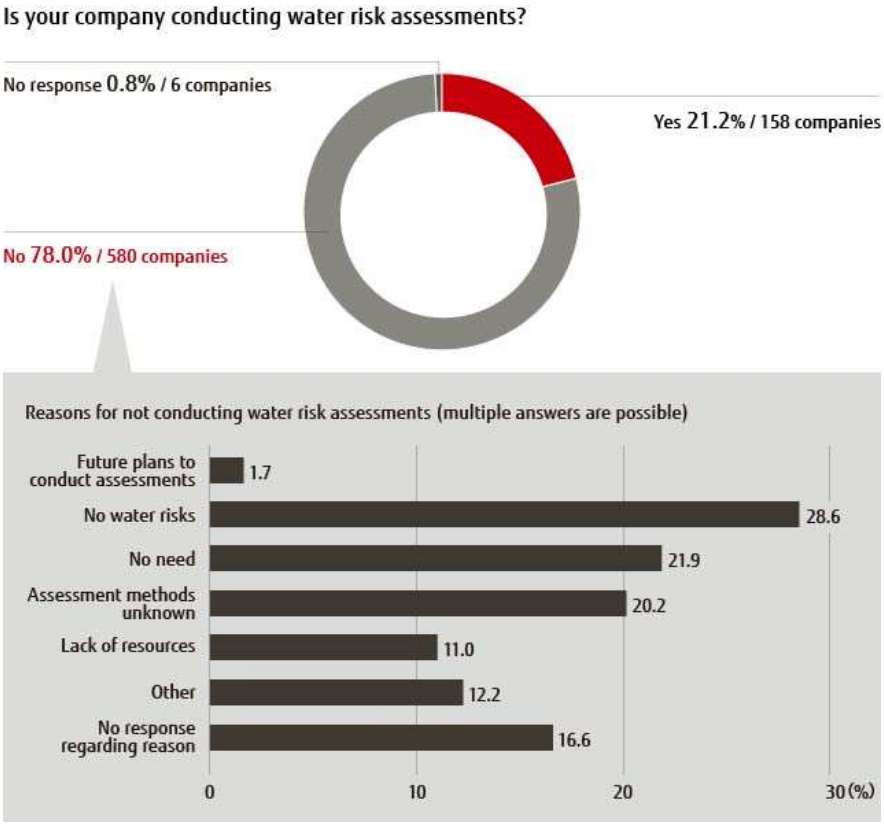
"Guideline for activities for reducing CO_2 emissions" can be downloaded from the following sites.

- Japan:
  https://www.fujitsu.com/jp/about/procurement/material/green/index.html
- Global:
  https://www.fujitsu.com/global/about/procurement/green/



Conservation of Water Resources: Adding Initiatives to Conserve Water Resources as a Key Theme for Taking Action

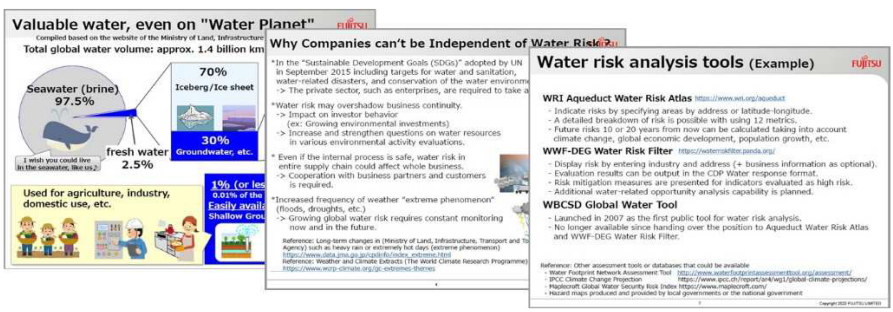
Against the backdrop of worsening water resource problems and growing international concern, in addition to continuing our work to reduce CO_2 emissions as pursued under the Fujitsu Group Environmental Action Plan (Stage VIII), we positioned conservation of water resources as a key theme that we needed to ask our suppliers to address, starting in Stage IX. We reviewed the questions posed on our environmental survey forms in order to understand the status of activities and actual conditions of our suppliers, and identified the challenges we will face in expanding our activities in the future.



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. However, in our environmental survey, only about 20% of suppliers said that they were conducting water risk assessments. We received many responses from suppliers who are not conducting water risk assessments who said that conservation of water resources was not relevant to their companies—answering that they had "no water risks" or had "no need to conduct assessments" —as well as responses from companies that did not know how to assess water risks. In order to have suppliers think about conservation of water resources as an issue closer to home, we began offering the "Water risk assessment for companies" document, which compiles material on topics such as the importance of water risk assessments and introduces assessment tools that are publicly available. In the future, we will work to encourage even more suppliers to conduct water risk assessments and endeavor to conserve water resources.

"Water risk assessment for companies" can be downloaded from the following sites.

- Japan:
  https://www.fujitsu.com/jp/about/procurement/material/green/index.html
- Global:
  https://www.fujitsu.com/global/about/procurement/green/



Contents of "Water Risk Assessment for Companies "

Environmental Action Plan

Contributing to the Fulfillment of the SDGs through ICT Services

Our Approach

The Fujitsu Group touts "contributing to the fulfillment of the SDGs through ICT services" as one of the targets under the Fujitsu Group Environmental Action Plan (Stage IX). In 2015, the Sustainable Development Goals (hereafter, the SDGs) were adopted by the United Nations. Taking the clear articulation of the SDGs as international goals as an opportunity, our objective is to contribute more than ever to the sustainability of our customers and society.
In order to make a sustainable society a reality, not only do we need to combat global warming by reducing greenhouse gas (GHG) emissions, we also need to address various social and environmental issues, such as conservation of resources, preservation of biodiversity, stabilization of food supplies, urbanization measures, and disaster prevention. Information and communication technology (ICT), which brings about improvements such as optimization, efficiency, and automation in a wide range of fields, has the potential to significantly contribute to solving societal and environmental problems. We aim to make contributions to the SDGs on a global scale, together with our customers, by offering our ICT services.

FY 2019 Performance

Targets under the Fujitsu Group Environmental Action Plan (Stage IX)	FY 2019 Performance
Contributing to the fulfillment of SDGs through ICT services	55 items

Activities

In FY 2019, we carried out the following activities as measures to achieve our goals.

- Incorporated elements of the SDGs into various promotions and publicized them
- Held SDGs seminars and conducted workshops across the company, as well as for target business units
- Conducted workshops on business approaches with the SDGs as the starting point, etc.

Improvements are as follows.

1. Human resources measures (internal activities)
    - Number of lectures and workshops: 28
    - Shifted activities from "learning about the SDGs" to "raising awareness of the SDGs as a starting point for thinking about business"
        - Made conscious efforts to hold study sessions and lectures involving top-level personnel from the standpoint of increasing the ripple effects and effectiveness of these activities
        - In addition to holding lectures for promoting understanding of the SDGs, conducted workshops that would lead to the discovery of business opportunities

2. Business promotion measures (activities targeted towards outside parties)
    - Number of lectures and events: 27
    - Promoted our initiatives and supported customer communication by actively disseminating information
        - Disseminated information through media about how we perceive the SDGs, as well as our attitude and approach to the SDGs, in the FT&SV and the Integrated Report
        - Disseminated information about our initiatives by taking part in Fujitsu-sponsored events such as the Fujitsu Forum, as well as the World Economic Forum, the WBCSD, and events sponsored by other organizations

Examples of Initiatives in FY 2019

Holding Workshops

As part of promoting businesses that address societal issues, Fujitsu develops programs that aim to help employees understand the linkages between the SDGs and the services and solutions they are engaged in. This encourages the employees to incorporate an awareness of the SDGs into their work as they devise proposals and undertake activities. Specifically, this involves attending workshops where logic models are used to represent the economic, environmental and societal impacts of business activities and to rationalize the selling points of services based on the factors required to achieve the SDGs. These activities help participants to fully embrace the ideas that underpin business ventures designed to address societal issues.

Workshop in progress

Disseminating Information Through Media and Events

Fujitsu disseminates information through various media and events, including those by other organizations.
For example, at the Sustainable Brands 2020 Yokohama event, Fujitsu employees took the stage to explain Fujitsu's SDGs initiatives through talks based on the themes of "what companies need for sustainability" and "initiatives for preventing and mitigating disasters which use the latest in ICT."

- Sustainable Brands 2020 Yokohama
  ＊The following articles are special features from the Fujitsu Journal.
  Japanese only:
    - For corporate implementation of the SDGs, it is essential to make societal issues into personal issues
      (Part 1) https://blog.global.fujitsu.com/jp/2020-04-08/01/
      (Part 2) https://blog.global.fujitsu.com/jp/2020-04-08/02/

    - What measures are needed for communities to raise awareness of disaster prevention and mitigation?
      (Part 1) https://blog.global.fujitsu.com/jp/2020-05-14/01/
      (Part 2) https://blog.global.fujitsu.com/jp/2020-05-14/02/

- SDG-related Activities in Fujitsu
  ＊View other SDGs-related initiatives here.
  https://www.fujitsu.com/global/about/csr/sdgs/

Environmental Data

Global Warming Prevention

GHG Emissions Report Based on GHG Protocol Standards

* Indicators assured by third party

Indicator		FY2016 *1	FY2017 *2	FY2018	FY2019
Upstream (Scope 3) [ktons]					
	Purchased goods and services	2,432	2,169	1,840	1,436*
	Capital goods	31	13	6	9
	Fuel and energy-related activities not included in Scopes 1 and 2	76	72	71	133
	Transportation and distribution (Upstream)	99	80	69	64
	Waste generated in operations	8	7	5	N/A
	Business travel	107	86	93	155
	Employee commuting	87	69	68	52
	Leased assets (Upstream)	373	288	281	115
Reporting company (Scope 1, 2) [ktons]					
	Direct emissions (Scope1)	208	198	147	87*
	Indirect emissions from energy sources (Scope2)	1,021	939 *3 912 *4	808 *3 771 *4	715 *3* 663 *4*
Downstream (Scope 3) [ktons]					
	Transportation and distribution (Downstream)	N/A*5	N/A	N/A	N/A
	Processing of sold products	21	27	23	14
	Use of sold products	4,566	3,460	3,649	3,791*
	End-of-life treatment of sold products	N/A	N/A	N/A	N/A
	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	N/A

*1 Estimate on not applicable and other items
- Transportation and distribution (downstream): 5.4 ktons.
  Amount of emissions accompanying movement when individual customers purchase personal computers etc.
- Other items: 311 tons.
  Emissions due to movements of visitors to the exhibition.

*2 Estimate on not applicable and other items
- Transportation and distribution (downstream): 6 ktons.
- Disposal of products sold: 1 ktons.

*3 Location-based

*4 Market-based

*5 N/A : Not Applicable

Environmental Data

Material Balance

INPUT

Stage		Unit	FY2016	FY2017	FY2018	FY2019
Development / Design Planning / Design	Raw Materials					
	Metal	ktons	25	16	15	19
	Plastic	ktons	11	9	7	7
	Others	ktons	15	13	12	13
	Chemical Substances *1					
	VOC	ktons	1.4	1.3	1.1	0.6
	PRTR	ktons	9.8	9.5	10.4	9.6
	Water					
	Water usage	Mm^3	16.87	15.54	13.83	9.91*
	Energy					
	Total	PJ	20.38	19.25	17.35	16.30*
	Purchased electricity	GWh	1,899	1,800	1,614	1,477
	Heavy oil, kerosene, etc.	kL	10,118	10,100	6,822	3,570
	LPG、LNG	tons	3,059	2,954	2,222	2,115
	Natural gas, city gas	Mm^3	29.99	29.76	28.01	28.93
	District heating and cooling	TJ	43	43	41	37
Distribution / Sales	Energy					
	Fuel (light oil, gasoline, etc.)	PJ	1.46	1.18	1.02	0.95
Usage	Energy					
	Electricity	GWh (PJ)	8,111 (80.87)	6,680 (66.60)	7,356 (73.34)	8,224 (81.99)
Collection / Reuse / Recycling	Resources recycling rate	%	92.0	91.5	91.7	91.1
	Amount processed	tons	4,185	3,844	3,436	3,210

OUTPUT

Stage		Unit	FY2016	FY2017	FY2018	FY2019
Development / Design Planning / Design	Raw Materials					
	CO_2 emissions	ktons-CO_2	640	520	410	450
	Chemical Substances *1					
	VOC	tons	245	228	178	161*
	PRTR	tons	11	10	9	8*
	Atmospheric Release					
	Total GHG emissions	ktons-CO_2	1,229	1,137	955	802*
	CO_2	ktons-CO_2	1,122	1,040	895	795*
	GHG other than CO_2 (PFCs, HFCs, SF_6, others)	ktons-CO_2	107	97	60	7*
	NOx	tons	104	63	32	47
	SOx	tons	30	11	4	1
	Water Discharge					
	合計	Million m^3	15.28	14.61	12.65	9.06
	BOD	tons	391	290	270	274
	COD	tons	179	94	55	35
	Waste					
	Amount of Waste Generated	ktons	22.4	21.9	19.0	15.7*
	Thermal recycling volume	ktons	4.7	4.8	4.0	3.0*
	Material recycling volume	ktons	15.6	16.0	14.3	12.0*
	Disposal volume	ktons	2.1	1.1	0.7	0.6*
Distribution / Sales	Atmospheric Release					
	CO_2	ktons-CO_2	99	76	69	64
Usage	Atmospheric Release					
	CO_2	Million tons-CO_2	4.57	3.46	3.65	3.79*

* Indicators assured by third party

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

Environmental Data

Environmental Performance Data Calculation Standards

- Applicable Period: April 1, 2019 – March 31, 2020

Fujitsu Group Environmental Action Plan (Stage IX)

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

Target Item	Indicator	Unit	Calculation Method
Reduce greenhouse gas (GHG) emissions from business sites by 14% or more (compared to FY 2013), and reduce GHG emissions by 2.1% or more, year-on-year, through voluntary efforts.	GHG emissions	Tons-CO_2	• Amount of CO_2 emissions: Σ [(Electricity, fuel oil, gas, and district heating and cooling annual usage) x CO_2 conversion factor for each type of energy*] *CO_2 conversion factor: Conversion factor for power, based on the Act on Promotion of Global Warming Countermeasures • Location-based: • Japan: Usage of 0.461 tons-CO_2/MWh in FY 2019 (Source: Basic emission factors from the Electric Power Council for a Low Carbon Society) • Overseas: IEA EMISSION FACTORS 2019 DATABASE DOCUMENTATION • Market-based: • Japan: FY 2018 emission factors for each power producer are used (adjusted emission factors (residue)) (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 (by country)
			• Amount of non-CO_2 GHG emissions: Annual emissions of HFCs, PFCs, SF_6 and NF_3 at two semiconductor plants (Mie Fujitsu Semiconductor Limited and Aizu Fujitsu Semiconductor Wafer Solution Limited). Σ[Annual emissions for each type of gas*1 x Global warming potential for each gas*2] *1 Based on the calculation method used by the appliances and electronics industries: Amount of each gas used (or purchased) x Reactant consumption rate x Removal efficiency, etc. *2 Global Warming Potential (GWP): IPCC (Intergovernmental Panel on Climate Change) Fourth Assessment Report "Climate Change 2007"
	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 (DC) by 2% or more compared to FY 2017.	Rate of PUE improvements	%	• PUE = Σ (Total DC energy consumption) ÷ Σ (Total IT device energy consumption) Σ: Combined total energy of the 28 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 by 20% or more compared to FY 2017.	Rate of increase in the use of renewable energy	%	The percentage of increase in the amount of power generated in-house or purchased from external sources using renewable energy (solar power, wind power, hydro power, biomass, geothermal, etc.) from FY 2017 (base fiscal year) to the relevant fiscal year

Promote eco design for resource saving and circulation and increase resource efficiency of newly developed products by 25% or more (compared to FY 2014).	Rate of improvement of resource efficiency of new products	%	• The average rate of improvement of resource efficiency (versus FY 2014) of products*. * Hardware products under the Fujitsu Brand, newly developed between FY 2016 and FY 2020. 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 amounts of waste generated by 5% or more of the average waste generated from FY 2012-2014 (14,226 t/1 year).	Amount of waste generated	Tons	Total amount of industrial waste and general waste generated at plants and business sites (Thermal recycling volume + Material recycling volume + Disposal volume)
	Effective utilization rate (Japan only)	%	(Amount of effective use (thermal recycling & material recycling) / Amount of waste generated) x 100
Maintain 90% or more resource reuse rate of business ICT products.	Resource reuse rate of business ICT products	%	Based on the calculation method provided by JEITA, recycled components and resources as a percentage of the weight of used products processed in Japan. Excludes collected waste other than used electronic products
Reduce total water usage by 1% compared to FY2017 (83,000 m^3)[3].	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
Limit the release of chemical pollutants (PRTR) to an amount below the average amount released from FY 2012-2014 (17.4t/1 year).	Volume of PRTR-targeted substances released	Tons	Total emissions of substances subject to 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) that are handled in quantities of 100 kg or more per year per substance at each business site, including overseas sites
Reduce CO_2 emissions due to power consumption during product usage by 14% or more (compared to FY 2013).	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 sold products through downstream

GHG Emissions Amount Report based on GHG Protocol Standards

Indicator		Unit	Calculation Method
Upstream (Scope 3)	Purchased goods and services	tons	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)
	Capital goods	tons	Monetary value of capital x Emissions value per unit of capital value (Source: Same as above)
	Fuel and energy–related items not included in Scopes 1 and 2	tons	Annual amounts of fuel oil and gas, electricity and heat purchased (consumed) mainly at business sites owned by Fujitsu x Emissions per unit (Source: Basic Guidelines for Calculating Greenhouse Gas Emissions Via Supply Chains and the Carbon Footprint Communication Program Basic Database Ver. 1.01 published by the Ministry of the Environment and the Ministry of Economy, Trade and Industry)
	Transportation and distribution (upstream)	tons	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	International transport/overseas local transport: transportation ton-kilometer x Emission per unit (Source: GHG protocol emissions coefficient database)
	Waste generated in operations	tons	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: Basic Guidelines for Calculating Greenhouse Gas Emissions Via Supply Chains published by the Ministry of the Environment and the Ministry of Economy, Trade and Industry)
	Business travel	tons	(By means of transport) Σ(Transportation expense payment x Emissions per unit) (Source: Basic Guidelines for Calculating Greenhouse Gas Emissions Via Supply Chains Ver. 2.6 and Emissions per Unit Database Ver. 2.6 published by the Ministry of the Environment and the Ministry of Economy, Trade and Industry)
	Employee commuting	tons	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	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 Warning Countermeasures – GHG Emissions Accounting, Reporting, and Disclosure System; Overseas: IEA CO_2 Emissions from Fuel Combustion Highlights 2018)
Reporting company (Scope 1, 2)	Direct emissions	tons	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 "Greenhouse gas emission (CO_2 emissions, greenhouse gas emissions other than CO_2) from business sites" in the Environmental Action Plan (Stage IX)
	Indirect emissions from energy sources	tons	CO_2 emissions from the consumption (purchase) of electricity and heat mainly at business sites owned by Fujitsu * For the calculation method, see "Greenhouse gas emission (CO_2 emissions) at business sites" in the Environmental Action Plan (Stage IX).
Downstream (Scope 3)	Processing of sold products	tons	Intermediate product sales volume*1 x Emissions per unit of processing volume*2 *1 Intermediate product sales volume refers to Fujitsu's device solution sales *2 Emissions per unit of processing volume is calculated from Fujitsu's FY 2015 assembly plant data
	Use of sold products	tons	Electricity consumption during product use x Emissions per unit electricity (Source: Emission factors FY 2018 performance by The Electric Power Council for Low Carbon Society, general electricity transmission and distribution utilities) *Electricity consumption during product use is calculated as electricity usage for the anticipated usage time per product unit 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
	End-of-life treatment of sold products	tons	(Weight of all sold products / Weight of products processed at Fujitsu's recycling centers during the year) x Electricity used at Fujitsu's recycling centers during the year x Emissions per unit of electricity (Source: Actual emission factor for each electricity utility based on ministerial ordinances on calculation and adjustment emission factor for each electricity utility based on reporting orders, announced for each fiscal year from FY 2011 to FY 2015)

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 5-3-4-10 in this book.

Indicator			Unit	Calculation Method
INPUT				
Design/ Procurement/ Manufacturing/ Development	Raw Materials		tons	Material inputs to our major products*1 shipped 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[(Electricity, fuel oil and gas, and district heating and cooling annual usage) 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/1000m^3 were used for town gas.
		Purchased electricity	MWh	Annual electricity usage
		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.
Usage	Energy	Electricity	GWh	Electricity consumed in connection with major products ** shipped during the fiscal year (Amount of electricity used for time estimated per product unit x Units shipped in the fiscal year)
			GJ	
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 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.
	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 IX).
		GHG emissions other than CO_2	tons	* For the calculation method, see "Greenhouse gas emissions (GHG emissions other than CO_2) from business sites" in the Environmental Action Plan (Stage IX).
		NOx emissions	tons	NOx concentration (ppm) x 10^{-6} x Dry gas emissions (m^3N/hr) x Operating time (hr/yr) x 46/22.4 x 10^{-3}
		Sox emissions	tons	SOx concentration (ppm) x 10^{-6} x Dry gas emissions (m^3N/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	* For the calculation method, see "Waste generated" in the Environmental Action Plan (Stage IX).
		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 re-use 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 Report based on GHG Protocol Standards.
Usage	Atmospheric Release		tons-CO_2	Emission intensity per electricity has changed since FY 2017. For the calculation method, see "Use of sold products" in the GHG Emissions Report based on GHG Protocol Standards.

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

*2 Four electrical and electronic industry associations:
The Japan Electrical Manufactures' 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 FY2019

Organizations covered by the report

The coverage is of Fujitsu itself plus a total of 135 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, 2020.

Organizations covered by each Indicators

- Scope1,2,3 : Organizations that are the subject of calculations used in the GHG Emissions Report based on GHG Protocol Standards
- Water : Japan; Fujitsu and Fujitsu Group offices excluded datacenters.
  Overseas; Fujitsu and Fujitsu Group manufacturing sites
- Waste : Japan; Fujitsu offices excluded datacenters and Fujitsu Group manufacturing sites
  Overseas; Fujitsu and Fujitsu Group manufacturing sites
- Chemical : Fujitsu and Fujitsu Group manufacturing sites.
  *The sites that handle less than 100 kg of chemical substances per year are excluded.
- EMS : Organizations with Environmental Management Systems (EMS). Including organizations with voluntary EMS.

Headquarters

No.	Company name	Scope1,2,3	Water	Waste	Chemical	EMS
1	Fujitsu Limited	✔	✔	✔	✔	✔

Fujitsu Group companies in Japan (95companies)

No.	Company name	Scope1,2,3	Water	Waste	Chemical	EMS
1	FUJITSU HOME & OFFICE SERVICES LIMITED	✔				✔
2	Kawasaki Frontale Limited	✔				✔
3	Fujitsu Travelance Ltd.	✔				✔
4	Fujitsu Techno Research Limited	✔				✔
5	Fujitsu CIT Limited	✔				✔
6	Toyama Fujitsu Limited	✔	✔			✔
7	Fujitsu Facilities Limited	✔				✔
8	OKINAWA FUJITSU SYSTEMS ENGINEERING LIMITED	✔				✔
9	DIGITAL PROCESS LTD.	✔				✔

10	PFU LIMITED	✔	✔	✔	✔	✔
11	FUJITSU BANKING SOLUTIONS LIMITED	✔				✔
12	SHIGA FUJITSU SOFTWARE LIMITED	✔				✔
13	FUJITSU BROAD SOLUTION & CONSULTING Inc.	✔				✔
14	FUJITSU SOCIAL SCIENCE LABORATORY LIMITED	✔				✔
15	FUJITSU YFC LIMITED	✔				✔
16	FUJITSU NIIGATA SYSTEMS LIMITED	✔				✔
17	FUJITSU HOKURIKU SYSTEMS LIMITED	✔				✔
18	FUJITSU KYUSHU SYSTEMS LIMITED	✔				✔
19	FUJITSU KAGOSHIMA INFORNET LIMITED	✔				✔
20	FUJITSU FIP CORPORATION	✔				✔
21	FUJITSU CLOUD TECHNOLOGIES LIMITED	✔				✔
22	G-Search Limited	✔				✔
23	FUJITSU FSAS INC.	✔				✔
24	FUJITSU COMMUNICATION SERVICES LIMITED	✔				✔
25	FUJITSU NETWORK SOLUTIONS LIMITED	✔				✔
26	Fujitsu Frontech Limited	✔	✔	✔	✔	✔
27	FUJITSU SYSTEM INTEGRATION LABORATORIES LIMITED	✔				✔
28	FUJITSU TOKKI SYSTEMS LIMITED	✔				✔
29	FUJITSU DEFENSE SYSTEMS ENGINEERING LIMITED	✔				✔
30	Fujitsu Applications, Ltd.	✔				✔
31	FUJITSU LEARNING MEDIA LIMITED	✔				✔
32	FUJITSU RESEARCH INSTITUTE	✔				✔
33	Fujitsu Marketing Limited	✔				✔
34	FUJITSU FOM LIMITED	✔				✔
35	FUJITSU CoWorCo LIMITED	✔				✔
36	TWO-ONE LIMITED	✔				✔
37	FUJITSU I-NETWORK SYSTEMS LIMITED	✔	✔	✔	✔	✔
38	ECOLITY SERVICE LIMITED	✔				✔
39	FUJITSU ADVANCED ENGINEERING LIMITED	✔				✔
40	Fujitsu Software Technologies Limited	✔				✔
41	FUJITSU MIDDLEWARE LIMITED	✔				✔
42	Fujitsu Kyushu Network Technologies Limited	✔				✔
43	Fujitsu Telecom Networks Limited	✔	✔	✔	✔	✔
44	FUJITSU COMPUTER TECHNOLOGIES LIMITED	✔				✔

45	FUJITSU IT PRODUCTS LIMITED	✔	✔	✔	✔	✔
46	Fujitsu Isotec Limited	✔	✔	✔	✔	✔
47	FUJITSU PERIPHERALS LIMITED	✔	✔	✔	✔	✔
48	FUJITSU PERSONAL SYSTEM LIMITED	✔				✔
49	FUJITSU KASEI RECYCLE LIMITED	✔				✔
50	Fujitsu Interconnect Technologies Limited	✔	✔	✔	✔	✔
51	FUJITSU QUALITY LABORATORY LIMITED	✔	✔			✔
52	Fujitsu Optical Components Limited	✔	✔	✔	✔	✔
53	FUJITSU KANSAI-CHUBU NET-TECH LIMITED	✔				✔
54	Fujitsu Mission Critical Software LTD.	✔				✔
55	FDK CORPORATION	✔	✔	✔	✔	✔
56	Transtron Inc.	✔	✔	✔		✔
57	SHINKO ELECTRIC INDUSTRIES CO. LTD.	✔	✔	✔	✔	✔
58	FUJITSU LABORATORIES LTD	✔	✔	✔	✔	✔
59	FUJITSU SEMICONDUCTOR LIMITED	✔				✔
60	Fujitsu Design Limited	✔				✔
61	Fujitsu Advanced Technologies Limited	✔				✔
62	FUJITSU CAPITAL LIMITED	✔				✔
63	United Semiconductor Japan Co., Ltd. (formerly MIE FUJITSU SEMICONDUCTOR LIMITED)	✔	✔	✔	✔	✔
64	AIZU FUJITSU SEMICONDUCTOR LIMITED	✔	✔	✔	✔	✔
65	AIZU FUJITSU SEMICONDUCTOR WAFER SOLUTION LIMITED	✔	✔	✔	✔	✔
66	Fujitsu IT Management Partner Co. Ltd.	✔				✔
67	Fujitsu IS Service Limited	✔				✔
68	Fujitsu Quality & Wisdom Limited	✔				✔
69	FUJITSU PUBLIC SOLUTIONS LIMITED	✔				✔
70	FUJITSU ADVANCED SYSTEMS LIMITED	✔				✔
71	Fujitsu Systems Applications & Support Limited	✔				✔
72	FUJITSU YAMAGUCHI INFORMATION CO.,LTD	✔	✔			✔
73	FUJITSU SHIKOKU INFOTEC LIMITED	✔				✔
74	FUJITSU SYSTEMS WEB TECHNOLOGY LIMITED	✔				✔
75	FUJITSU NETWORK SERVICE ENGINEERING LIMITED	✔				✔
76	FUJITSU SOCIAL LIFE SYSTEMS LIMITED	✔				✔
77	Mobile Techno Corp.	✔				✔
78	Care Net Ltd.	✔				✔

79	Fujitsu Advance Accounting service Limited	✔				✔
80	Fujitsu Harmony Limited	✔				✔
81	UCOT Infotechno co., Ltd	✔				✔
82	AB System Solutions Limited	✔				✔
83	ZIS INFORMATION TECHNOLOGY CORPORATION	✔				✔
84	Fujitsu Yamagata Information Technology Limited.	✔				✔
85	BANKING CHANNEL SOLUTIONS Limited	✔				✔
86	IT MANAGEMENT PARTNERS LIMITED	✔				✔
87	YJK Solutions Co., Ltd.	✔				✔
88	Best Life Promotion Ltd.	✔				✔
89	Fujitsu Traffic & Road Data Service Limited	✔				✔
90	Future City Solutions Limited	✔				✔
91	TechShop Japan Limited	✔				✔
92	Fujitsu Engineering Technologies Limited	✔				✔
93	Smart Agriculture IWATA Co., Ltd.	✔				✔
94	Grand Bouquet Otaki, K.K.	✔				✔
95	FITEC	✔				✔

Fujitsu Group companies worldwide (39 companies)

No.	Company name	Scope1,2,3	Water	Waste	Chemical	EMS
1	Jiangsu Fujitsu Telecommunications Technology Co., Ltd.	✔	✔	✔		✔
2	Fujitsu Electronics Pacific Asia Limited	✔				✔
3	Fujitsu Electronics (Shanghai) Co., Ltd.	✔				✔
4	FUJITSU HONG KONG LIMITED	✔				✔
5	FUJITSU DO BRASIL LIMITADA	✔				✔
6	FUJITSU ASIA PTE LTD	✔				✔
7	FUJITSU NETWORK COMMUNICATIONS INC.	✔	✔	✔	✔	✔
8	Fujitsu America, Inc.	✔				✔
9	Fujitsu (Thailand) Co., Ltd.	✔				✔
10	FUJITSU BUSINESS TECHNOLOGIES ASIA PACIFIC LIMITED	✔				✔
11	FUJITSU AUSTRALIA LTD.	✔				✔
12	Fujitsu Technology Solutions GmbH	✔	✔	✔		✔
13	Fujitsu Electronics Europe GmbH	✔				
14	Fujitsu Nanda Software Technology Co., Ltd	✔				✔
15	FUJITSU SERVICES HOLDINGS PLC	✔				✔

16	FUJITSU KOREA LTD.	✔				✔
17	FUJITSU TAIWAN LIMITED	✔				✔
18	Fujitsu Telecommunication Asia Sdn. Bhd.	✔				✔
19	Fujitsu (China) Holdings Co., Ltd.	✔				✔
20	Fujitsu Technology and Business of America, Inc.	✔				✔
21	FUJITSU (XI'AN) SYSTEM ENGINEERING Co., Ltd.	✔				✔
22	Beijing Fujitsu System Engineering Co., LTD.	✔				✔
23	Fujitsu Glovia, Inc.	✔				✔
24	FUJITSU AUSTRALIA SOFTWARE TECHNOLOGY PTY. LTD.	✔				✔
25	FUJITSU Enabling Software Technology GmbH	✔				✔
26	Fujitsu Electronics America, Inc	✔				
27	Fujitsu Electronics Korea Ltd.	✔				
28	Fujitsu Research and Development Center Co., LTD.	✔				✔
29	Fujitsu Computer Products of America	✔				✔
30	Fujitsu Consulting India	✔				
31	FUJITSU (CHINA) Co., Ltd.	✔				✔
32	Fujitsu Finance America, Inc.	✔				✔
33	FUJITSU EMEA PLC	✔				✔
34	Fujitsu RunMyProcess SAS	✔				✔
35	UShareSoft, SAS	✔				✔
36	Fujitsu Greenhouse Technology Finland Oy	✔				✔
37	Fujitsu Systems Global Solutions Management Sdn. Bhd.	✔				✔
38	Fujitsu Sweden AB	✔				
39	Fujitsu New Zealand Limited	✔				