FUJITSU

Fujitsu Group Environmental Report 2016

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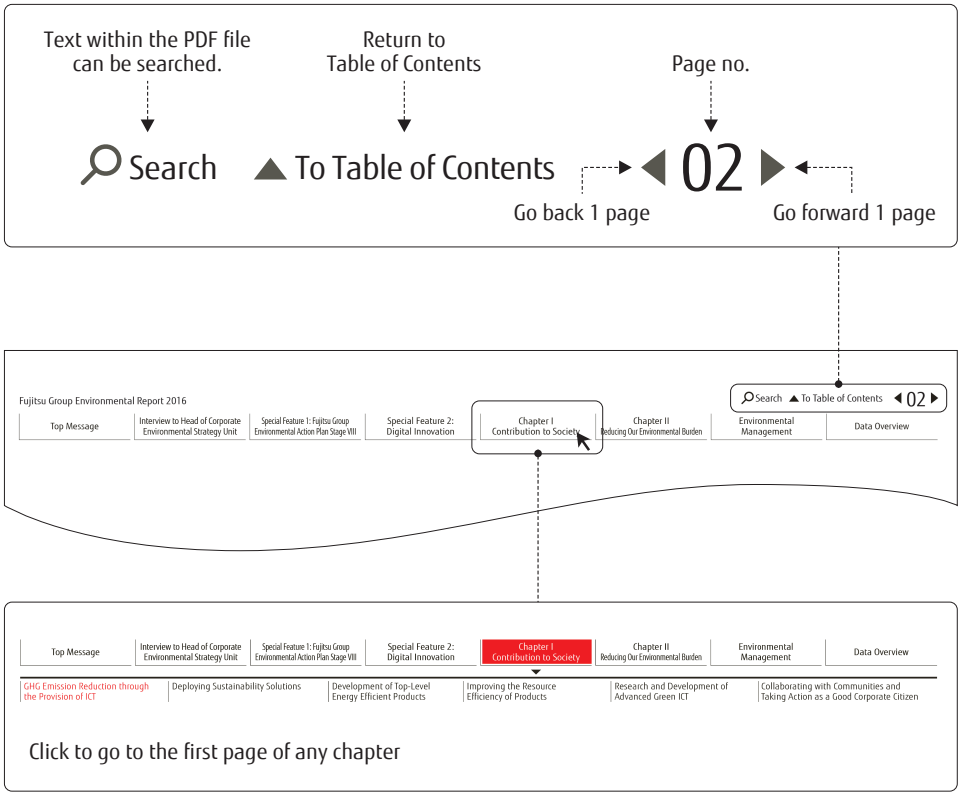
User Guide



Editorial Policy

The Fujitsu Group Environmental Report 2016 offers a report on our recognition of environmental initiatives, our approach to initiatives, and our performance and major activities in FY 2015, in line with the Fujitsu Group Environmental Action Plan (Stage VII, FY 2013 – FY2015) that was formulated on the basis of expectations and requests from society and of important environmental aspects of the Fujitsu Group. The report also carries information on Environmental Action Plan (Stage VIII, FY 2016 – FY2018), which starts this fiscal year. Fujitsu Group strives to improve the reliability and transparency of the content of reports, through means including subjecting major data to examination by third-party organizations and publishing third-party opinions concerning indicators. In addition, we have taken ease of reading on PCs and tablets into account through a horizontally oriented page layout.

Reporting Period

This report focuses on activities in FY 2015, from April 1, 2015 to March 31, 2016, and the data presented is actual performance data from that period. Content from times outside that period, however, is also presented.

Target Readership

This report is written assuming the following readership: All Fujitsu stakeholders, with high interest in environmental topics, including customers, employees, stockholders and investors, suppliers and business partners, international society and local communities, public institutions, and governments and specialists such as CSR survey institutions.

Organizations Covered

The coverage is of Fujitsu itself plus a total of 117 companies (including companies outside Japan) centering on consolidated subsidiaries that have built environmental management systems.

» List of Organizations Covered by the Report on Environmental Activities (See Page 63)

» Environmental Performance Data Calculation Standards (See Page 60)

Significant Changes in Coverage

- With the transfer of Fujitsu VLSI Limited (FVD) to a new company, FVD is now outside the scope of this report.
- With the transfer of some business functions from three entities (Fujitsu Semiconductor Limited's (FSL) Mie Plant, Aizu Plant, and Fujitsu Semiconductor Technology Limited (FSET)) to four entities (Mie Fujitsu Semiconductor Limited (MIFS), Aizu Fujitsu Semiconductor Wafer Solution Limited (AFSW), Aizu Fujitsu Semiconductor Manufacturing Limited (AFSM), and Aizu Fujitsu Semiconductor Limited (AFSL)), environmental accounting data for FSL and FSET is presented as data for MIFS, AFSW, and AFSM, and environmental burden data for FSET is outside the scope of this report.
- With the transfer of Fujitsu Wireless Systems Limited (FWL) to Fujitsu Telecom Networks Limited from October 2015, FWL's environmental accounting data is outside the scope of this report.
- From January 2016, the environmental burden data for Aizu Fujitsu Semiconductor Probe Limited (AFSP) has been added to this report.

Guidelines Used and Referenced

- GRI G4 Sustainability Reporting Guidelines
- Ministry of the Environment: Environmental Reporting Guidelines (2012 edition) (Japanese)
- Ministry of the Environment: Environmental Accounting Guidelines (2005 edition) (Japanese)

Published

August 2016 (The next report will be published in August 2017 and the previous report was published in July 2015.)

For inquiries about this report, please contact:

FUJITSU LIMITED
Corporate Environmental Strategy Unit
4-1-1, Kamikodanaka, Nakahara-ku, Kawasaki-shi, Kanagawa 211-8588

http://www.fujitsu.com/global/about/environment/management/communication/contact.html

A Note Concerning Future Projections, Forecasts and Plans

This report not only describes past and present facts related to the Fujitsu Group but also includes future projections, forecasts and plans. Such projections, forecasts and plans are based on data available when the report was prepared, and therefore involve a degree of uncertainty.
Accordingly, future results of operating activities and other new developments may differ from the projections, forecasts and plans included in this report. We ask our readers' understanding of the fact that the Fujitsu Group cannot be responsible for such eventualities.

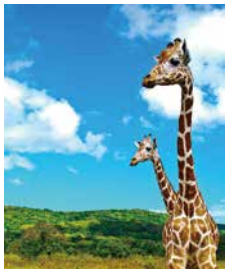
We welcome your feedback

Fujitsu welcomes readers' comments on this report, which are used as statistical data to help us create better reports. We thank you in advance for your cooperation.

WEB http://www.fujitsu.com/global/about/environment/management/communication/report/









Fujitsu Group Environmental Report 2016

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Top Message

As a Global ICT Company, Fujitsu Group will Create Digital Transformation and Contribute to the Achievement of a Sustainable Society.

Tatsuya Tanaka
Fujitsu Limited President

Movements by the International Community toward Sustainable Society

The previous year marked a turning point in terms of agreements on new globally shared objectives for achieving a sustainable society. In September, the UN adopted sustainable development goals (SDGs), while at the 21st Conference of Parties (COP21) held in Paris in December, 196 participating countries and regions agreed on a new framework for combating climate change. There are increasing demands that international society come together to address issues such as food and water shortages, underdeveloped social infrastructure, climate change, and natural disasters.

Creation of New Value through Digital Transformation

Today, initiatives are moving forward to incorporate digital technologies into products, services, and processes that will create new value and transform business and public services. This is digital transformation.

ICT has contributed to improvements in energy usage efficiency and to greater efficiency in the production and consumption of goods. From here on out, as diverse goods and services cross beyond the conventional boundaries to connect digitally, we believe that we can contribute to the achievement of optimal energy and resource usage throughout social systems, and to the resolution of new issues that may come about through natural disasters and urbanization.

Fujitsu's vision is the achievement of a safer, more prosperous and sustainable Human Centric Intelligent Society through the power of technology. We will pursue the realization of this vision and, together with our customers and partners, will make all-out efforts to create significant value for business and society.

Toward Environmental Management that Supports the Sustainability of our Customers and Society

In April 2016, we launched Fujitsu Group Environmental Action Plan (Stage VIII) as a step toward the achievement of our vision. The new environmental action plan furthers the two standpoints of contributing to society by ICT and reducing the environmental impacts of our business. Under contributing to society, we will make distinct contributions to the sustainability of our customers and society through our business activities. Under reducing the environmental impacts of our business, we will set greenhouse gas emission reduction targets with the COP21 framework in mind, and will strengthen initiatives along the entire value chain.

Looking ahead, the Fujitsu Group will, as a global ICT company, create digital transformation through new connections with customers that cross the boundaries of industries and nations, and will contribute to the creation of a sustainable society.

Interview

to the environmental general manager

Hideyuki Kanemitsu

VP, Head of Corporate Environmental Strategy Unit

We Will Contribute to Overcoming Social and Environmental Issues Using ICT, with Our Sights on the Sustainable Development of Humanity and Society

Amid demands for the creation of innovation aimed at achieving sustainable society, the Fujitsu Group, as an ICT company, must encourage cooperation and co-creation more than ever, and must contribute to the shared objectives of humanity. Under this recognition, Hideyuki Kanemitsu, VP and Head of Corporate Environmental Strategy Unit, discusses the environmental management that the Fujitsu Group must pursue from here on out, along with key points of the new Fujitsu Group Environmental Action Plan (Stage VIII).

Q1 How does the Fujitsu Group view social and environmental issues?

A1 We recognize the modern age as one that calls for collaboration and co-creation aimed at achieving sustainable development, a shared goal of humanity.

The year 2015 was a milestone year in which two new policies were hammered out under global-level consideration of the future creation of sustainable society.

The first of these policies is the Sustainable Development Goals, or SDGs, adopted by the United Nations General Assembly. Under these, all UN member nations must work to achieve 17 goals that include the elimination of poverty and hunger, response to climate change, protection of the environment, and gender equality. High expectations are placed on investment and innovation by private companies as a driving force for meeting the goals.

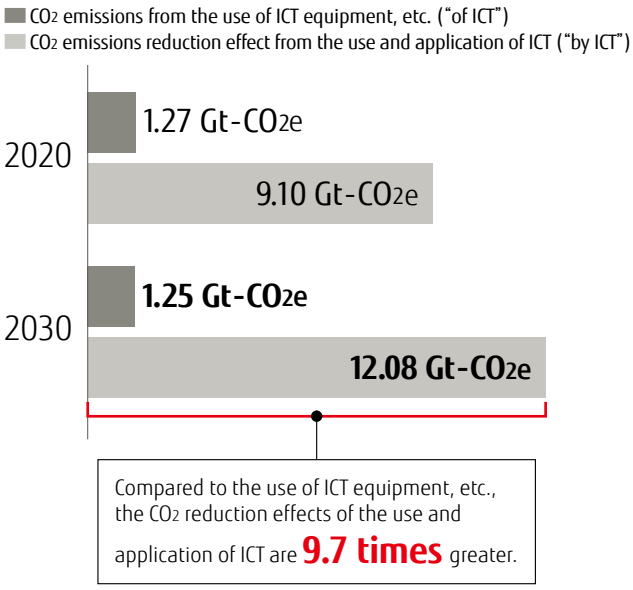
The second policy is the Paris Agreement, an international framework for addressing global warming from 2020, adopted at the 21st Conference of the Parties to the United Nations (UN) Framework Convention on Climate Change (COP21). As a globally shared long-term target for climate change issues, the parties agreed to keep the increase in average temperature below 2°C, while making efforts to further restrict it to 1.5°C. It is predicted that this measure will accelerate environmental investment aimed at adapting to the negative impacts of climate change.

We believe that these two policies suggest the need for a shift in approach to global environmental problems, from "individual response" to "collaboration and co-creation." In environmental conservation activities up to now, individual companies have worked to reduce the environmental impacts generated through their business activities, and, while expanding the domain of related management, have undertaken the reduction of environmental impacts along the entire supply chain. Over many years, this sort of approach has steadily yielded results in the form of environmental impact reductions. However, with fixed measures and policies having run their course and having been wrung dry, it has become difficult to expect significant environmental impact reductions from the extension of conventional approaches.

What is needed in response is a shift in the quality of environmental conservation activities. Looking ahead, we believe that there is a need to create innovation that will bring about positive impacts on the environment and society. Toward that end, instead of individual companies undertaking initiatives as in the past, collaboration and co-creation that cross national borders, industry boundaries, and other walls are necessary. Against a background that includes the globalization of economies and the advancement and proliferation of ICT, in recent years there has been increased attention on "Creating Shared Value," or CSV, as openness and flatness progress in the world. We believe this also has great potential for business. In every sector, it is certain that ICT will play important roles. We recognize that the world today is in an age that calls for collaboration and co-creation aimed at achieving humanity's shared goal of sustainable development.

Q2 What sort of impact will ICT have on social and environmental issues?

CO_2 Emissions Volume of ICT, and the CO_2 Emission Reduction Effect of the Use and Application of ICT



Graph created by Fujitsu based on the Global e-Sustainability Initiative's SMARTer2030 report.

A2 The evolution of digital technology holds the potential to create innovation that leads to sustainable development.

There are two aspects to the impact that ICT will have on the global environment. One is the negative aspect, from the increased energy consumption and increased greenhouse gas (GHG) emissions from the use of servers, PCs, and other devices. The other is the positive aspect that contributes to the resolution of issues such as climate change through systems and solutions leveraging ICT.

ICT is expected to undergo further proliferation and expansion while continuing its accelerated evolution. In order for ICT to remain a key technology that advances humanity and society, we have to minimize the negative aspect while expanding the positive. Achieving this requires that we consider countermeasures from two perspectives: reduction of the environmental impacts "of ICT" and reduction of environmental impacts "by ICT."

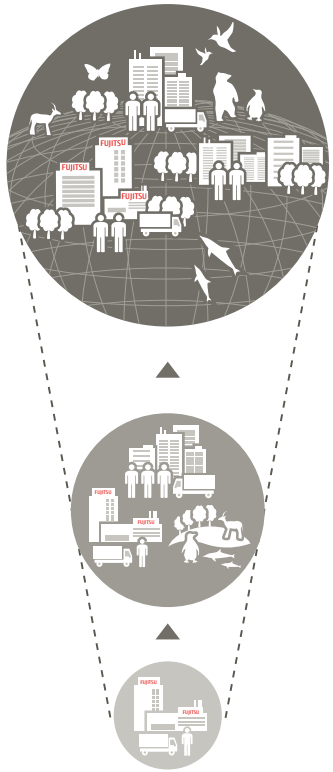
Under the "of ICT" perspective, for example, strengthening the development of environmentally conscious products will lead to the realization of more products that consume less electricity. Moreover, as cloud businesses expand and the number of data centers increases, optimizing the temperature and air conditioning control of data centers and otherwise promoting environmental consciousness is an important theme for ICT companies like Fujitsu.

Under the "by ICT" perspective, there are expectations for the creation of solutions that lead to overcoming problems and making improvements in the area of climate change and other issues that impede sustainable development. As an example of an environmental issue, the amount of power generated by renewable energy such as wind power can vary with the weather, making adjustment of supply and demand difficult. Addressing this through ICT to achieve technology that can measure wind flow and strength to predict the amount of power supply will aid in making wind power widespread.

In this way, we believe that digital technology is what will provide the motive power for undertaking both "of ICT" and "by ICT" at a high level. New digital technologies such as the IoT, artificial intelligence (AI), and robotics are beginning to build society beyond the next generation. The Fujitsu Group will lead the evolution of this digital technology, and, by making effective use of that technology, will support the resolution of environmental issues, new energy, disaster prevention, advanced agriculture, next-generation traffic management, manufacturing, and more, and will promote digital innovation that contributes to the achievement of the globally shared goal of sustainable development.

Q3 What are the results of Environmental Action Plan (Stage VII), which ended in FY 2015, and what issues remain?

Changes in the Fujitsu Group Environmental Action Plan



Stage VII (FY 2013–2015)

Highlight the contributions from our business operations

- Provide solutions able to contribute to the reduction of GHG emissions by customers and society
- Consolidate the energy saving performance of data centers
- Strengthen the environmental features of products (energy saving, resource saving features)
- Generate technologies and solutions to address diverse social issues

Stage VI (FY 2010–2012)

Promotion of environmental management centered on the three pillars of contribution to customers and society overall, further reduction of our own environmental impacts, and conservation of biodiversity.

Stage I-V (FY 1993–2009)

Thorough enhancement of the Fujitsu Group's own consideration of the environment

A3 We cleared all 17 of the targets under the plan, and achieved certain results in "contribution to resolving environmental problems through our business activities."

The Fujitsu Group launched its succession of three-year Environmental Action Plans in 1993, and since then has promoted environmental management aimed at achieving the plans' targets.

FY 2015 marked the final year of the Environmental Action Plan (Stage VII) that began in FY 2013. Stage VII was built on two standpoints: "contribution to our society," under which we use ICT effectively to contribute to the reduction of environmental impacts, and reducing the environmental impacts of "our business," under which we work to reduce environmental impacts associated with the business activities of Fujitsu. In particular, we reaffirmed that the reduction in environmental impacts through the use of ICT is larger than the impacts associated with our own business activities, and more clearly worked out a stance of contribution to resolving global environmental issues through business activities such as the provision of sustainability solutions and reduction of GHG emissions through the provision of ICT.

As targets for our action plan, we set 17 items to be achieved by FY 2015, and succeeded in meeting all of them.

In particular, we are proud to have met high standards for two items directly connected to the problem of climate change: "contribution to society by ICT: reduce greenhouse gas emissions" and "efficient business operations: data centers." We also see these as significant in the sense that we made the effects of reducing impacts visible and showed society that these can be quantitatively manageable.

We achieved these targets because we expanded the lineup of environmental contribution solutions, which contributed to reducing customers' environmental impacts, and sales expanded. As this movement shows, market needs for environmental contribution solutions are increasing steadily. We see this as a major business opportunity for the Fujitsu Group, and will continue our efforts to create and expand environmental contribution solutions.

With regard to the item "efficient business operations: reduce greenhouse gas emissions" in the plan, our reduction of 35% greatly exceeded the target reduction of 20% or more (compared to FY 1990). We believe that part of the reason for this was the use of simulation technology in our plants and data centers, a major success in making effective use of ICT on our part.

In this way, we recognize that we have prepared systems and mechanisms for steadily achieving our targets. From here on out, we aim to further instill consciousness of "contribution to resolving environmental problems through our business activities" in each and every employee. We hope to consider and engage in initiatives that will promote autonomous thought and active involvement by every employee, so that we can lay the groundwork for each one of us to consider what we can do to reduce environmental impacts in our work.

Q4 What are key points of the new Environmental Action Plan (Stage VIII)?

Features of Environmental Action Plan Stage VIII

Aiming for the Development of Sustainable Society and the Realization of Zero Emissions as a Long-Term Goal

Support the ability of customers to contribute to the resolution of social and environmental issues (achievement of the SDGs) through ICT services

Set targets along the entire value chain to achieve internationally adopted GHG emissions reduction targets

A4 We have prioritized "Support for contribution to SDGs through ICT" and "Reduction of GHG emissions along the entire value chain."

Fujitsu has based Environmental Action Plan (Stage VIII), which runs from FY 2016 to FY 2018, on the two policies for the construction of sustainable society that were adopted globally in 2015, as discussed in Q1. With the new plan inheriting the standpoints of "contribution to society" and reducing the environmental impacts of "our business" from Environmental Action Plan (Stage VII), we have set targets for 14 items.

In the action plan, we have set a basic policy of "aiming for the development of sustainable society and zero emissions as a long-term goal," with priority on "support for ICT services to enable customers to contribute to the resolution of social and environmental issues (achievement of the SDGs)" and "undertaking initiatives along the entire value chain to achieve internationally adopted GHG emissions reduction targets."

In "contribution to our society," we have worked to provide sustainability solutions that contribute to reducing customers' and society's GHG emissions through ICT services, and that contribute to customers and society by broadening the targeted domain from the reduction of GHG emissions to the sustainability of society. From here on out, we will further expand the contributions to customers and society that we have pursued, and, in line with the SDGs, will more understandably convey our contributions to customers and society, with our customers' customers in mind as well, and connect this to the corporate growth through the creation and acquisition of business opportunities. We also hope to actively communicate the achievements of our contributions, and to help improve the timing for achieving the SDGs.

In reducing the environmental impacts of "our business," we will make efforts to reduce GHG emissions from our workplaces. Based on the Paris Agreement, we performed backcasting from Japan's FY 2030 GHG emissions reduction targets, and set a GHG emissions reduction target of 5% or more compared to FY 2013 for our workplaces. In addition, taking energy conservation in our data centers as a key theme, we acted ahead of other companies to set a clear numerical target of 8% or higher improvement in data center PUE* compared to FY 2013, a goal that we are now ambitiously addressing.

With regard to environmental management, we will further promote globalization, will construct environmental management systems (EMSs) or systems conforming to EMS at all Group companies worldwide, and will expand the boundaries of our environmental management. In addition, with regard to initiatives incorporating not only the environment but also resolution of social issues, we will exchange ideas globally and otherwise work to strengthen global governance in our environmental management.

* **PUE:** Power Usage Effectiveness, an indicator of data center energy efficiency.

Special Feature 1:

The Focus of the Fujitsu Group Environmental Action Plan Stage VIII

The Fujitsu Group has formulated environmental targets for FY 2016 to FY 2018 under Fujitsu Group Environmental Action Plan (Stage VIII). Below is an introduction to key points of the new action plan, which aims to expand our contribution to customers and society and to reduce greenhouse gas emissions along the entire value chain, amid an increasingly pressing need for responses to social and environmental issues.

Fujitsu Group Environmental Action Plan (Stage VIII)

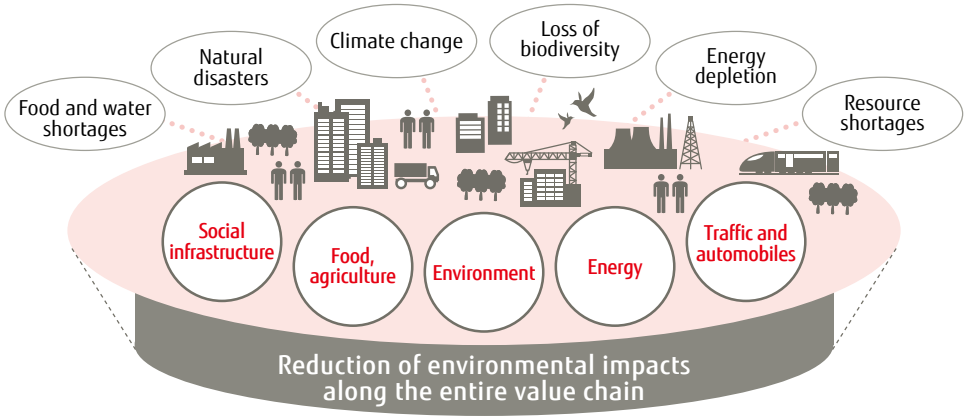
The Fujitsu Group views contribution to global sustainability as one of the responsibilities that a company bears. Under this belief, since 1993 we have formulated environmental action plans and have expanded activities aimed at continuously reducing environmental impacts.

Today, globally shared targets to resolve complexly intertwined social and environmental issues are being put forth. These include the SDGs adopted by the UN and the Paris Agreement agreed upon at COP21. Private companies, too, are under increasing expectations to undertake solutions more actively.

Against this background, the Fujitsu Group formulated Environmental Action Plan (Stage VIII), covering environmental targets for FY 2016 to FY 2018. This action plan is constructed from two standpoints: contribution to society and reducing the environmental impacts of our business. Under contribution to society, we will undertake actions including expanding the development and provision of solutions that will help realize the SDGs. Under reducing the environmental impacts of our business, we will work to reduce environmental impacts along the entire value chain in order to achieve long-term zero emissions.

Looking ahead, we will continue contributing to the resolution of social and environmental issues through the utilization of ever-evolving ICT, as we work to achieve a sustainable and affluent society.

Contribution to resolving social and environmental issues through ICT



Target items

Our Society	Contribute to sustainable development and preservation of biodiversity through provision of ICT services	(1) Contribute to sustainable development of society through provision of ICT services.
		(2) Develop innovative technologies that address environmental issues.
	Improve environmental performance of products throughout their lifecycle	(3) Achieve top-level energy efficiency for 50% or more of the new products.
		(4) Promote eco design for resource saving and circulation and increase resource efficiency of newly developed products by 15% or more.
		(5) Maintain over 90% resource reuse rate of business ICT equipment.
Our Business	Reduce greenhouse gas emissions throughout the value chain	(6) Reduce greenhouse gas emissions in our business facilities.
		(6)-1 Reduce greenhouse gas emissions by 5% or more compared to FY 2013.
		(6)-2 Improve PUE of our major data centers by 8% or more compared to FY 2013.
		(6)-3 Improve energy intensity by an average of 1% or more each year.
		(6)-4 Increase usage of renewable energy.
		(7) Drive activities to reduce CO_2 emissions in the supply chain.
		(8) Reduce CO_2 emissions per sales from transport by an average of 2% or more each year.
	Reduce environmental impact	(9) Reduce water consumption by 1% in total (128,000 m^3).
		(10) Reduce chemical pollutant (PRTR) release to less than the average level of FY 2012-2014 (20.7t).
		(11) Reduce the amount of waste to less than the average level of FY 2012-2014 (25,568t).

Features of Environmental Action Plan (Stage VIII) (1)

Contribution to the Resolution of Customers' Social and Environmental Issues (Achievement of SDGs) through ICT Services

Through the provision of ICT services, the Fujitsu Group will work to achieve the SDGs together with our customers.

Proposal of the SDG concept began with the High-Level Panel on Global Sustainability (GSP) held in the beginning of 2011. The SDGs were subsequently adopted in September 2015 following deliberation in the United Nations Conference on Sustainable Development (Rio + 20) and the Open Working Group task team launched in the UN. (See note)

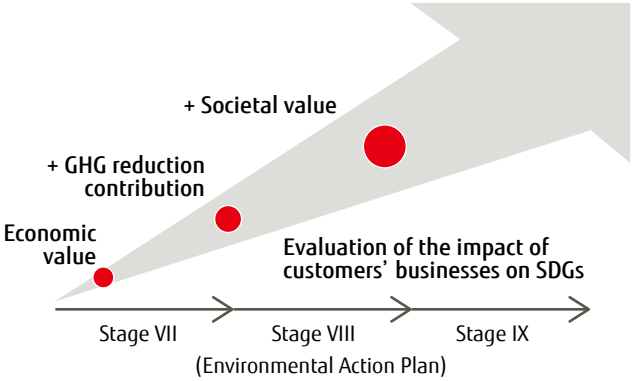
Conversely, the Fujitsu Group named "deployment of sustainability solutions" as a target in Environmental Action Plan (Stage VII), and since 2013 has worked to provide and expand solutions that contribute to the sustainability of society.

With the SDGs having been clarified as international targets, in Environmental Action Plan (Stage VIII) we aim to contribute even more to the sustainability of customers and society. Specifically, we are re-evaluating the question of what kind of value to provide to our customers' customers (end users) and to society through the deployment of ICT services in light of the SDGs framework, and are using this in the development of ICT services and proposals to customers.

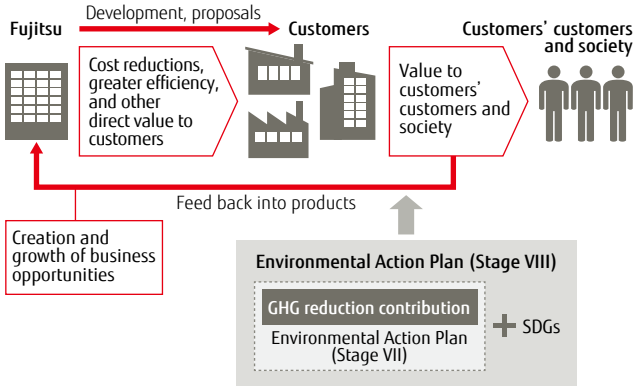
Through these initiatives, we will aid customers in meeting the SDGs and will connect this to the creation and growth of business opportunities for the Fujitsu Group.

Note: Created with reference to information by the United Nations Development Programme (UNDP): http://www.jp.undp.org/content/tokyo/ja/home/presscenter/articles/2015/08/21/sdg.html

Change in value Fujitsu Group Provide



Relationship between Environmental Action Plan (Stage VIII) and business



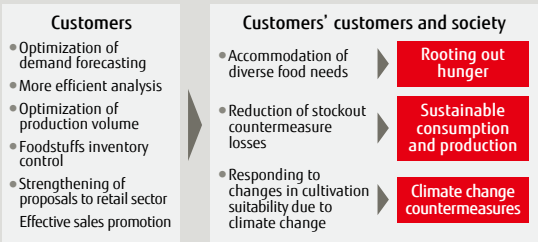
Point in Check

Providing Value to Customers and Society through Solutions in the Food and Agriculture Domains

Japan's food and agricultural domains are facing challenges such as the aging of the farming population, the lack of successors on farms, and entry into the market from other industries. Against this background, the Fujitsu Group is providing solutions that support corporate agricultural management with a focus on our "Akisai" cloud service for food and agriculture.

This solution not only provides customers with merits such as increased quality and stable supply of produce and improved profitability, but also provides consumers and society with benefits such as accommodation of diversifying food needs, reduction of food waste, and adaptation to climate change. By analyzing and evaluating such relationships, we will connect the relationships to ICT services that deliver even greater value.

Value provided in the food and agriculture domains



Features of Environmental Action Plan (Stage VIII) (2)

Engaging in Initiatives along the Entire Value Chain Aimed at Achieving Internationally Accepted GHG Emissions Reduction Targets

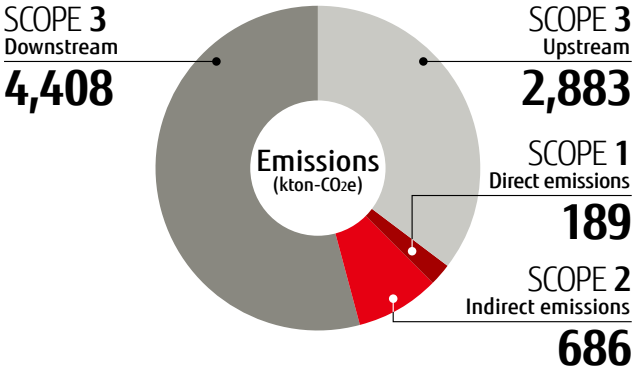
Backcasting from Japan's GHG emissions reduction targets for 2030 to set targets for work sites

At COP21, Japan proposed a 26% reduction in GHG emissions compared to FY 2013 as a target for FY 2030. To contribute to the achievement of this internationally accepted target, the Fujitsu Group is undertaking reductions along the entire value chain, which includes Fujitsu Group business facilities, the supply chain (suppliers), and transport. Under Environmental Action Plan (Stage VIII), we will make greater efforts than ever in initiatives in each of these areas.

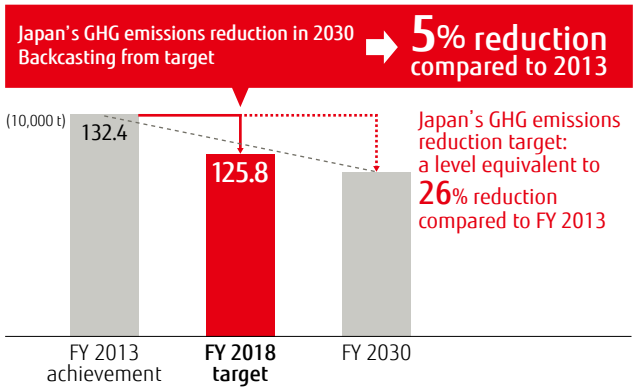
First, in our business facilities we have applied Japan's GHG emissions reduction target to the Fujitsu Group and set a target of a 5% reduction compared to FY 2013. To achieve this, we will work to deploy high-efficiency equipment and improve the operation of existing equipment, while also expanding targets for administration and strengthening management at overseas sites. In addition, we will further conserve energy in data centers and expand the use of renewable energy.

With regard to the supply chain, we are requesting that secondary suppliers as well as primary suppliers develop activities to reduce GHG emissions, and are implementing support for these activities. To reduce GHG emissions associated with transport, we have raised the target value we set in Environmental Action Plan (Stage VII) and are making efforts toward global collaboration on efforts such as further promoting modal shift and increasing the efficiency of international transport.

GHG emissions along the entire value chain



Fujitsu Group GHG emissions reduction targets



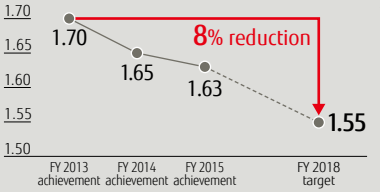
Point in Check

Energy Conservation in Data Centers is a Key Point in Achieving GHG Emissions Reduction Targets at Work Sites

As cloud-based businesses grow, the energy demand of data centers is increasing. This makes enhancing their energy conservation both a social responsibility and an important activity for strengthening business foundations.

Accordingly, in our Environmental Action Plan (Stage VII), we developed measures aimed at promoting environmentally conscious data centers. Under Environmental Action Plan (Stage VIII), we are targeting an improvement of 8% or more in data center PUE* compared to FY 2013, a target that is nearly unprecedented among companies in Japan. In addition to continuing measures such as optimizing external ventilation and moderating air conditioning temperature, we will link air conditioning control to information about the interior of ICT equipment, and engage in other initiatives that take advantage of ICT.

Changes in average PUE value at targeted data centers

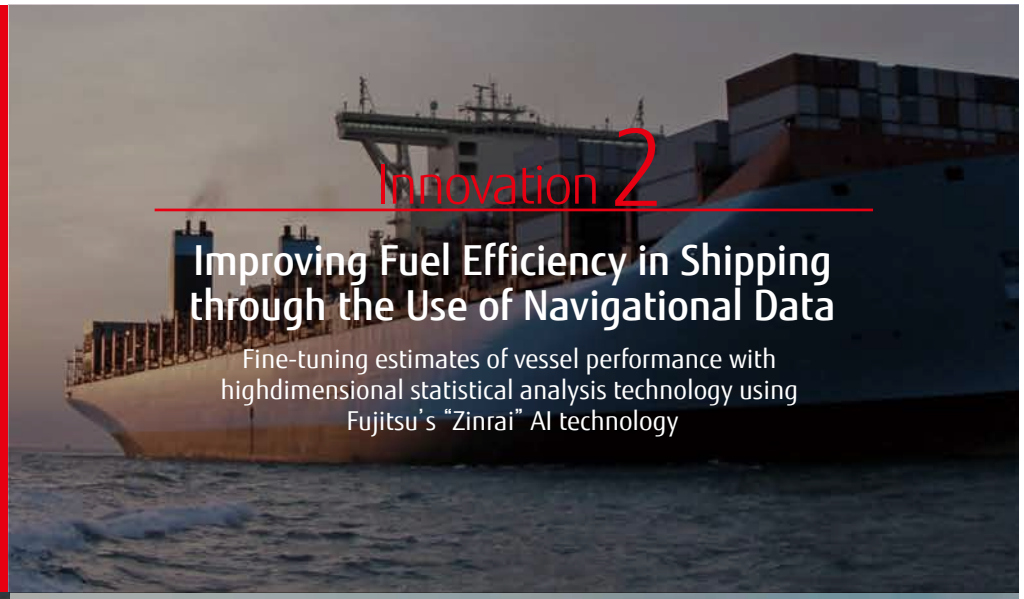


* PUE: Power Usage Effectiveness, an indicator of data center energy efficiency.

Special Feature 2

Digital Innovation

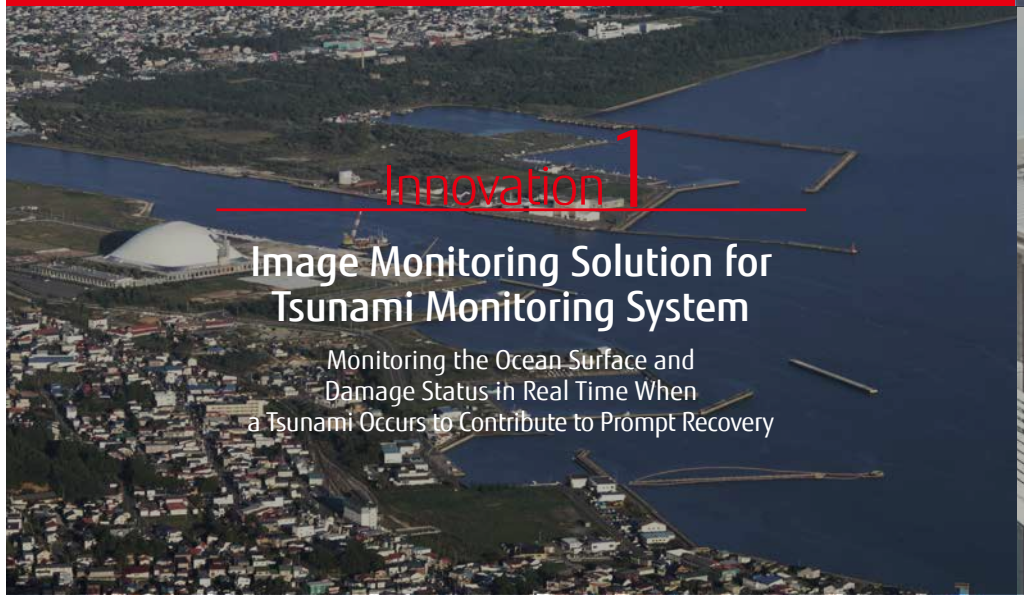
for Sustainable Development



Innovation 2

Improving Fuel Efficiency in Shipping through the Use of Navigational Data

Fine-tuning estimates of vessel performance with highdimensional statistical analysis technology using Fujitsu's "Zinrai" AI technology



Innovation 1

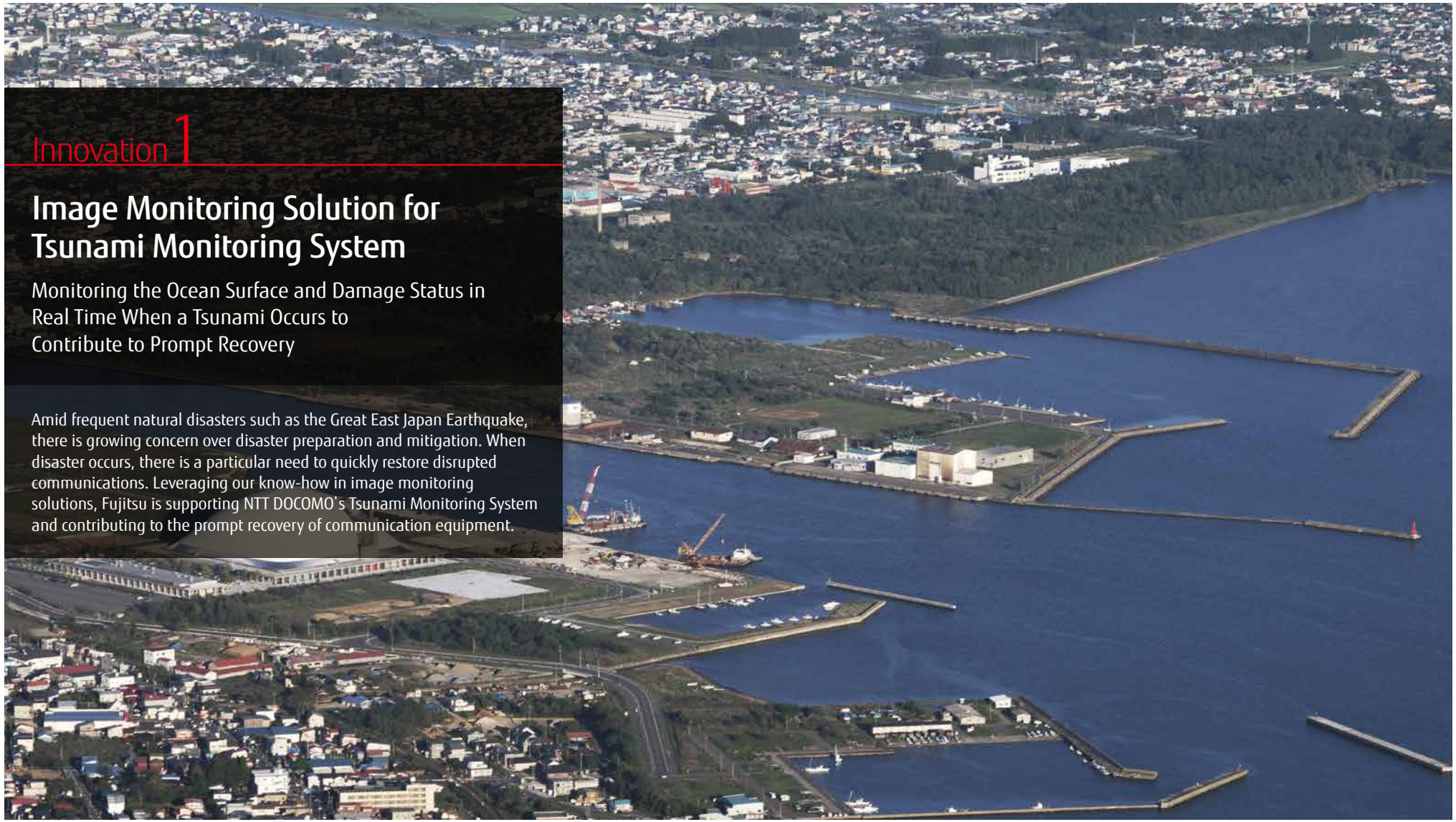
Image Monitoring Solution for Tsunami Monitoring System

Monitoring the Ocean Surface and Damage Status in Real Time When a Tsunami Occurs to Contribute to Prompt Recovery

Innovation 3

Rooftop Solar Power Project Leveraging IoT + Cloud Technologies

Supporting Stable System Operation through Fujitsu's Solar Power Monitoring Service that Supports Maintenance Service



Innovation 1

Image Monitoring Solution for Tsunami Monitoring System

Monitoring the Ocean Surface and Damage Status in Real Time When a Tsunami Occurs to Contribute to Prompt Recovery

Amid frequent natural disasters such as the Great East Japan Earthquake, there is growing concern over disaster preparation and mitigation. When disaster occurs, there is a particular need to quickly restore disrupted communications. Leveraging our know-how in image monitoring solutions, Fujitsu is supporting NTT DOCOMO's Tsunami Monitoring System and contributing to the prompt recovery of communication equipment.

Innovation 1 Image Monitoring Solution for Tsunami Monitoring System

Monitoring the Ocean Surface and Damage Status in Real Time When a Tsunami Occurs to Contribute to Prompt Recovery

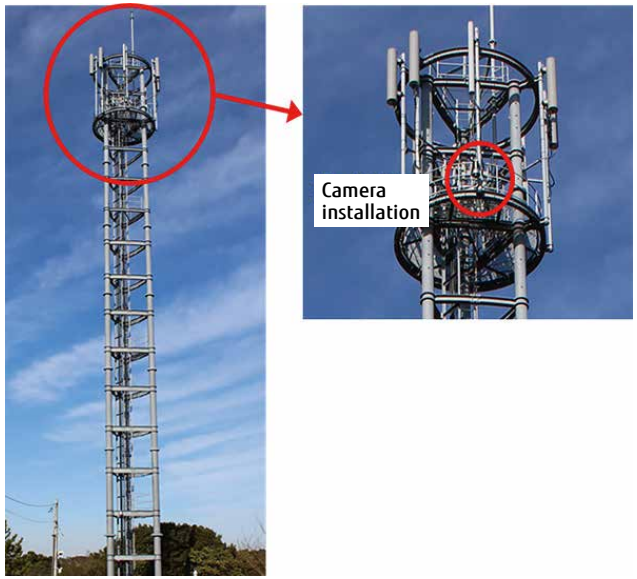
With a variety of natural disasters seen in recent years, concern over disaster preparation and mitigation is rising. For telecommunications carriers in particular, prompt recovery of base stations and other equipment is an imperative following a disaster.

In response, NTT DOCOMO launched operation of its Tsunami Monitoring System in March 2016. The system installs high-performance monitoring cameras in base stations along the coast to monitor the ocean surface offshore when a tsunami occurs. Operated remotely, the cameras can also confirm the damage status of the base stations' communications equipment. Images picked up by the cameras can be assessed in real time, which is expected to aid in the prompt recovery of base stations.

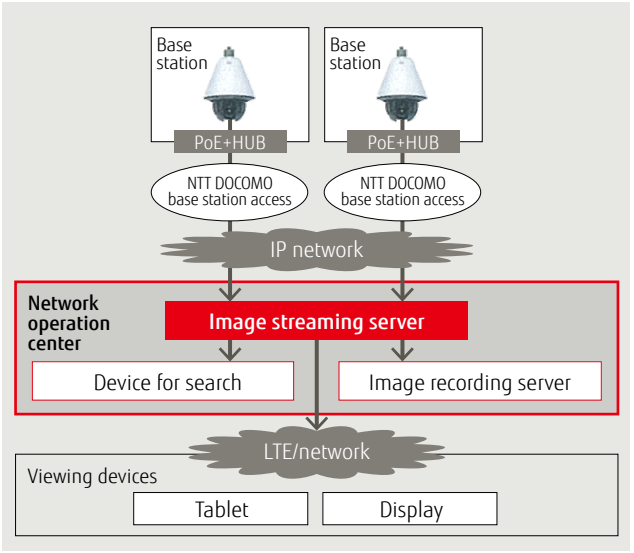
Fujitsu offers an image monitoring solution that includes monitoring cameras and networking equipment, providing total support that extends from high-resolution acquisition, storage, management, and encryption of images to transmission of images to devices. Using advanced compression and transmission technology, the system sends images in real time to NTT DOCOMO's network operation center.

Fujitsu has enabled multi-vendor selection of cameras from among multiple models according to desired features, has enabled a secure network environment to prevent leaks of monitored images, and has enabled the transmission of images to smartphones, tablets, and other devices, achieving a system that offers convenience and reliability. Moreover, as some utilize independent power sources based on solar panels, they can continue monitoring even after a disaster, thus contributing to the reduction of environmental impacts and electricity expenses.

At present, the monitoring cameras are installed in four locations, including the city of Shima in Mie Prefecture. Drawing on our extensive track record of implementing image monitoring solutions, we will support NTT DOCOMO's tsunami monitoring system, cooperate with disaster countermeasure initiatives, and contribute to the creation of a safe and secure society.



Overview of system



Innovation 2

Improving Fuel Efficiency in Shipping through the Use of Navigational Data

Fine-Tuning Estimates of Vessel Performance with High-Dimensional Statistical Analysis Technology Using Fujitsu's "Zinrai" AI Technology

Annual CO_2 emissions associated with marine transportation are about 900 million tons, or about 3% of global CO_2 emissions*. The marine transportation industry is being asked to improve fuel efficiency in order to reduce CO_2 emissions. Fujitsu has developed technology for applying and analyzing ships' operational data and precisely estimating fuel efficiency in actual sea conditions. Through this, we will contribute to increased fuel efficiency in ships.

* Values for FY 2012.

Innovation 2 Improving Fuel Efficiency in Shipping through the Use of Navigational Data

Fine-tuning estimates of vessel performance with highdimensional statistical analysis technology using Fujitsu's "Zinrai" AI technology

In recent years, the environmental impacts, economy, and safety of marine transport have become major issues for the shipping industry. Annual CO_2 emissions associated with marine transportation are about 900 million tons, or about 3% of global CO_2 emissions. In 2013, global CO_2 emissions regulations for new shipbuilding were adopted. Moreover, the annual cost of fuel is hundreds of billions of yen, making the reduction of fuel consumption an important issue.

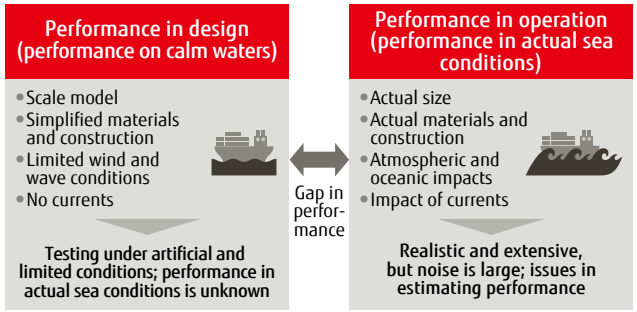
To overcome such issues, movements have begun in the marine transportation industry to collect, store, and analyze navigational data under stormy weather for use in planning safe and economical ships and in navigating ships in rough seas. However, estimation of ship performance in the past has relied on physics model simulations and water tank experiments using models, techniques that are unable to take into account the complex interactions of ship status, wind, waves, currents, and so on in actual seas, thus significantly compounding prediction errors.

In response, Fujitsu Laboratories Ltd. has applied and analyzed big data from actual sea conditions and has developed technology that precisely estimates fuel efficiency, speed, and other ship performance factors with an error of 5% or less. The technology uses proprietary high-dimensional analytical technology based on Fujitsu's "Zinrai" AI technology to analyze and learn from meteorological and hydrographical sensor data, ship engine log data, ship speed and location data, and other big data collected during actual passage, in order to estimate ship performance.

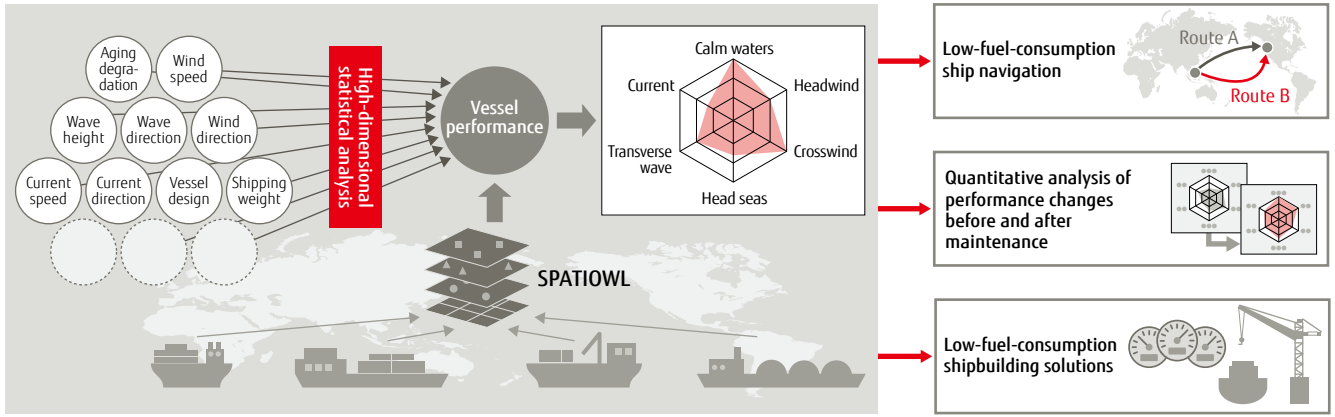
By incorporating the research results into the Weather Routing Simulation of Tokyo University of Marine Science and Technology and performing evaluation, the technology confirmed that fuel efficiency improvement of about 5% compared with shortest-route passage is possible. The technology has enabled the accurate prediction of actual ship performance in actual sea conditions, and will enable significant fuel efficiency improvements that can be fed back into ship performance evaluations and design and can be applied to ship navigation.

We plan to further improve the precision of predictions through joint research with Tokyo University of Marine Science and Technology. We will further carry out demonstrations applying the technology to diverse routes and vessel types, and aim to offer services through Fujitsu's location information cloud service, FUJITSU Intelligent Society Solution SPATIOWL, in fiscal 2016.

Gap in performance in design and operation



High-precision Estimate of Vessel Performance in Actual Sea Conditions



Innovation 3

Rooftop Solar Power Project Leveraging IoT + Cloud Technologies

Supporting Stable System Operation through Fujitsu's Solar Power Monitoring Service that Supports Maintenance Service

Amid expectations for the expansion of renewable energy, Leopalace21 Corporation, a developer of leased residential properties, operates its Roof Mega Solar Project.
Fujitsu supports this project with an IoT and cloud-based monitoring service that contributes to the expansion of solar power.

Innovation 3 Rooftop Solar Power Project Leveraging IoT + Cloud Technologies

Supporting Stable System Operation through Fujitsu's Solar Power Monitoring Service that Supports Maintenance Service

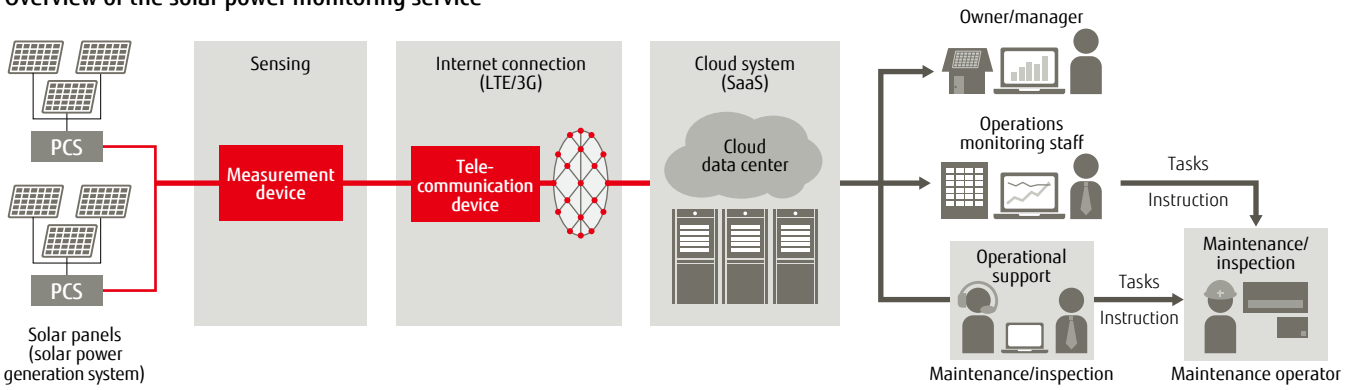
Leopalace21 Corporation is a major company in the rental property business. Seeking to conserve energy and reduce emissions of CO_2, the company launched a new project in 2011 to install solar power systems on the rooftops of its managed properties. However, the initial cost of installing rooftop solar power systems on rental properties is high and the burden on the property owners is large. In addition, solar power systems are exposed to wind, rain, and other elements, making them susceptible to failure and reduced power generation performance caused by external factors. These issues hindered the expansion of Leopalace21's new project.

Around the same time, Fujitsu launched a new business model for central management of its solar power remote monitoring service to support maintenance service. This was aimed at promoting the spread of solar power in residences in Fukushima Prefecture, which suffered extensive damage from the Great East Japan Earthquake. However, Fujitsu lacked know-how for selling to the residential market, and faced issues in growing the business.

Accordingly, Fujitsu approached Leopalace21, which develops rental properties nationwide, to propose an idea that paired the rental of rooftops from owners with the solar power monitoring service that combines the IoT and the cloud. Owners of the residential properties are able to earn fees from renting out their rooftops, without having to bear the initial expense of system installation. Through this innovative business model, the Roof Mega Solar Project was launched to aid the expansion of solar power. As of September 2015, the project has installed solar power generation equipment on the rooftops of 4,500 buildings.

Through sensors in solar power systems installed on rooftops in rental properties around the country, Fujitsu's solar power monitoring service collects data on solar panels' power generation, comparisons of amount of sunlight and expected power generation, and other data, every minute. The information obtained is sent to the data center every five minutes. When the system detects a problem, it sends an email alert to the operations monitoring center; if the center determines that a failure has occurred, maintenance workers are dispatched to the site. In this way, the system achieves central management, and by detecting trouble early, it prevents the loss of opportunities for power generation and helps achieve the stable operation of solar power generation systems.

Overview of the solar power monitoring service



Data sent from sensors installed in solar power generation system

Chapter I | Contribution to Society

Under the Environmental Action Plan (Stage VII), the Fujitsu Group is aiming to expand our contributions to society overall and has globally expanded the scope of our targets, including reduction of GHG emissions through the provision of ICT and social contribution activities by employees. Moreover, Fujitsu has set goals for expanding the provision of solutions that will contribute to global sustainability, as well as for promoting research and development. The company has made efforts to improve the environmental performance of ICT products.

Key Achievements in FY 2015

Contribution to reducing GHG emissions through ICT
39.99 million tons

New products with top-level energy efficiency
52.8%

Resource efficiency of new products
44.8% improvement (compared to FY 2011)

Hours of social contribution activities by employees
169,000 hours

About Symbols Used ✓ Examined by third-party organization ○ FY 2015 target achieved

Our Society

Theme	Target items (targets through the end of FY 2015)	FY 2014 Key Performance	FY 2015 Key Performance	Status	
Contribution to Society by ICT: Reduce Greenhouse Gas Emissions	Reduce greenhouse gas emissions for our customer and society over 38 million tons.*1	Contributed 24.83 million tons (Japan: 15.43 million tons; overseas: 9.40 million tons)	Contributed 39.99 million tons (Japan: 25.64 million tons; overseas: 14.36 million tons) ✓	○	P. 22
Contribution to Society by ICT: Increase Solutions	Increase the deployment of sustainability solutions.	Selected 12 solutions that contribute to sustainability, built out our product lineup in the climate change field, and gathered useful cases	Communicated information inside and outside Japan on 12 solutions (selected the previous fiscal year) that contribute to sustainability	○	P. 24
Design and Deliver Eco-efficient Products: Energy Efficiency	Achieve top-level energy efficiency*2 of more than 50% of the newly developed products.	46.0%	52.8% ✓	○	P. 25
Design and Deliver Eco-efficient Products: Resource Efficiency	Increase resource efficiency of newly developed products by 35%*3 compared to 2011.	33.6% improvement	44.8% improvement ✓	○	P. 27
Leading Edge R&D	Develop innovative technologies that enable solutions and products to reduce the environmental load.	Announced 25 key green technologies	Announced 25 key green technologies	○	P. 29
Corporate Citizenship: Social Challenges	Support initiatives that address the complex social and environmental challenges, e.g. biodiversity conservation.	Provided funding, technology, and human resource support	Provided funding, technology, and human resource support	○	P. 31
Corporate Citizenship: Social Activities	With society, support our employees to volunteer social activities.	Dedicated 145,000 hours to social contribution activities by employees	Dedicated 169,000 hours to social contribution activities by employees	○	P. 31

*1 **38 million tons:** Calculate the numeric target by multiplying annual sales of each solution category by a conversion factor of CO2e savings per sales, which is based on around 300 case studies of Environmentally Conscious Solutions in Japan. There was an upward revision of the target at the end of FY 2014.
*2 **Achieve top-level energy efficiency:** Achieve more than 25% of market benchmark in energy efficiency such as top-runner products (first in the world or industry, top of the world or industry)
*3 **35%:** An upward revision of the target at the end of FY 2014

GHG Emission Reduction through the Provision of ICT

Our Approach

Through the provision of ICT, the Fujitsu Group is working to create innovations in wide-ranging areas of society, including improvement of efficiency in energy usage, greater efficiency in production activities, and reduction in the movements of people and goods. By doing so, we aim to contribute to the reduction of GHG emissions. We believe that the use of ICT by large numbers of customers will reduce GHGs in society overall, while leading to ongoing business growth for the Fujitsu Group as well.

The Fujitsu Group is working to quantitatively visualize – and also expand – the contribution to GHG reductions from the ICT used by our customers. Between FY 2009 and FY 2012, this ICT usage has contributed to a cumulative reduction of 12.23 million tons of CO_2 emissions. From FY 2013, we extended the scope of our targets overseas, and have aimed to contribute to a global cumulative reduction in emissions of 38 million tons or more over the three years through FY 2015. We achieved that target with a result of 39.99 million tons reduced globally.

Summary of FY 2015 Achievements

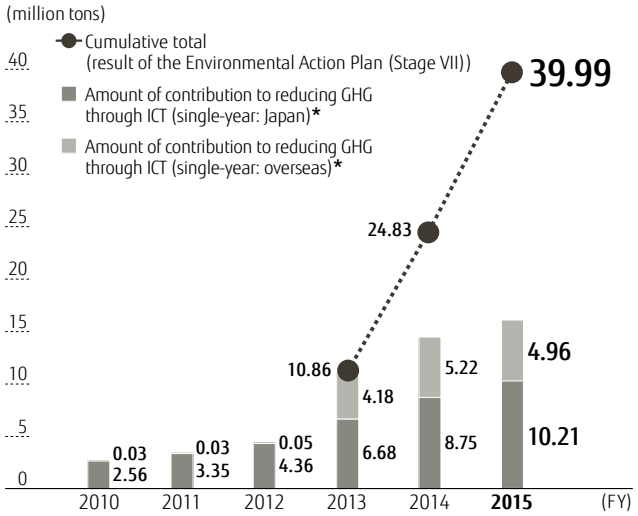
Targets under the Fujitsu Group Environmental Action Plan (Stage VII) (toward FY 2015)	Reduce greenhouse gas emissions for our customers and society over **38** million tons
Environmental Action Plan (Stage VII) Performance	**39.99** million tons [Japan: 25.64 million tons, Overseas: 14.36 million tons]

Performance and Results for FY 2015

Expanding Environmentally Conscious Solutions

To advance the quantitative visualization of GHG reduction effects through ICT, we recognize solutions with an expected reduction effect of 15% or more as "environmentally conscious solutions." In FY 2015 we moved ahead with recognizing these cases, centered on solutions that we provide to large numbers of customers. Moreover, we leveraged opportunities to propose environmental contribution effects to customers and worked to convey the environmental value of our solutions.

Amount of Contribution to Reducing Emissions of Greenhouse Gases (GHG) through the Provision of ICT



* Values for FY 2010 to FY 2012 represent performance under the Environmental Action Plan (Stage VI). From FY 2013, we are expanding the scope globally.

Recognizing 51 New Cases Including Cloud-Related and Tablet Utilization Solutions

The Fujitsu Group recognized 51 new cases of environmentally conscious solutions in Japan, bringing the cumulative total to 451. These new cases include the GLOVIA Smart Hotel Cloud Service, which offers total support for hotel management, and the AZCLOUD SaaS teraSpection cloud-based service, which uses tablets to manage inspection data for buildings and condominiums.

Examples of cloud-related solutions

1. FUJITSU Integrated System PRIMEFLEX for Cloud
   A vertically integrated virtual cloud platform
2. AZCLOUD SaaS teraServation
   A cloud-based service for the maintenance and renovation industry

Examples of tablet utilization solutions

1. AZCLOUD SaaS teraSpection
   A cloud-based facility inspection service using tablets
2. Tablet system for financial institution sales offices

FY 2016 Targets and Plans

Maintaining Activities for the Sustainable Development Goals (SDGs) and Working to Boost Accuracy when Reporting Our Contribution

In September 2015, the United Nations announced "Goal 13: Take urgent action to combat climate change and its impacts" in the SDGs at the heart of the UN's "2030 Agenda for Sustainable Development." Fujitsu will continue to promote our MetaArc and other cloud-based services in order to help achieve this goal. Additionally, we will review our method for calculating the level of our contribution and will report a more accurate performance figure.

GHG Emission Reduction through the Provision of ICT

Main Activities in FY 2015

Promoting Growth in Customer Utilization

Inside Japan, Fujitsu is promoting customer utilization of our solutions by, for example, quantitatively assessing the benefits of Yamato Protec Corporation's adoption of AZCLOUD SaaS teraServation. Yamato Protec sees disaster preparedness as part of addressing environmental issues and engages in R&D with the philosophy of "starting from the essentials." The company also promotes the commercialization of environmentally friendly fire extinguishers and equipment, as well as the recycling of extinguishers.

The company's aim in introducing teraServation was to boost the quality and operating efficiency of their maintenance inspections, but it is also contributing to a lower environmental burden from energy savings and other gains in their offices. Although no performance statistics exist yet for the newly adopted system, Fujitsu's calculations suggest an approximate 15% CO_2 reduction, despite greater power consumption by the company's ICT equipment. The company has commented that they "would like to utilize ICT to make work tasks more efficient and reduce environmental burden going forward."

Yamato Protec's fire fighting equipment

Example of the system in use (simulated image)

Strengthening Initiatives Overseas

Accompanying plans to bolster local business using the EcoCalc web tool, Fujitsu conducted workshops in Spain and Finland to share best practices and to create proposals using business cases from these countries. A municipal customer in Finland, Mikkeli City, has published information on their website detailing the adoption and the evaluation of Fujitsu's CaseM Solution. Fujitsu is proceeding in FY 2016 to cultivate and expand new initiatives in Europe alongside leaders in Spain, Finland, the UK, and Ireland.

Team members from Spain, the UK, Ireland, and Japan

Team members from Finland and Japan

Reference Information **Calculation Method for Amount of GHG Reduction Effect**

At the Fujitsu Group, we have assessed the quantitative reduction in environmental burdens (in terms of reduced CO_2 emissions) from ICT adoption. In calculating the amount of GHGs reduced annually, we tally CO_2 emission reductions per unit of sales and annual sales for each solution category.

In order to increase the accuracy of our GHG reduction figures in FY 2016, we are changing from conventional categories to calculations made for each recognized solution.

Overview of Environmental Impact Assessment Methodology

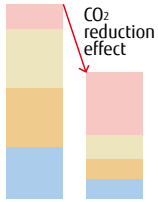
Conversion of 7 factors to CO_2 emissions

Resource consumption	Consumption of paper, CDs, documents
Movement of people	Movements by airplanes, trains, buses and automobiles
Transport of goods	Transport by trucks and rail freight
Office space	Associated work-hours, documents/equipment space
Warehouse space	Storage in regular/ refrigerated warehouses
Power Consumption of ICT/Network equipment	Power consumped by ICT equipement (servers, PCs, etc.)
Data communication traffic volume	Data communication traffic volume by Internet/FAX

Environmental-load basic unit database

Sum of CO_2 emissions

Before/After comparison



ICT solutions with expected reduction effect of 15% or more are certified as **environmentally conscious solutions**

Comment from Third-Party Verification Body

In continuation with last year, we reviewed, from a third party perspective, the FY 2015 data on the amount of contribution to GHG emission reduction through the provision of ICT. From the fact that all of the basic data used for calculations has undergone checks by the internal Review Meeting, we again confirmed that a calculation framework is in place and functioning effectively. The same calculation method as last year was employed for the FY 2015 tallies, though we observed Fujitsu's active stance toward reviewing and improving their approach in order to increase the accuracy of calculations for the next term.

Masatoshi Sakaguchi
System Certification Division, Bureau Veritas Japan

Deploying Sustainability Solutions

Our Approach

Achieving a sustainable society requires that we address a variety of social and environmental issues including: measures against global warming by reducing GHG emissions, adaptation to the effects of climate change, resource efficiency, conservation of biodiversity, food supply security, and urbanization.

In response, the Fujitsu Group is increasing deployment of sustainability solutions as we continue to respond to social and global environmental issues through ICT solutions. We studied and implemented these solutions through the global members of our Environmental Solutions Committee and its constituent working group (WG).

Summary of FY 2015 Achievements

Targets under the Fujitsu Group Environmental Action Plan (Stage VII) (toward FY 2015)	Increase the deployment of sustainability solutions.
FY 2015 Targets	Uncover case studies to communicate information on solutions that contribute to sustainability.
FY 2015 Key Performance	Communicated information inside and outside Japan on 12 solutions (selected the previous fiscal year) that contribute to sustainability

FY 2015 Performance and Results

Adding "Sustainability" as a Category under the Solutions Menu on the Fujitsu Website

On the Fujitsu website, we have added a "Sustainability" category that introduces solutions related to adapting to and mitigating climate change. Examples include Akisai, SPATIOWL, Enetune-BEMS, disaster preparedness solutions, and Intelligent Dashboard, all sustainability solutions ranging across the categories of food, agriculture, urban transportation, smart energy, disaster preparation, and environmental management.

A section of the website

Contributing to Better Awareness of ICT Solutions at Events and International Conferences

Fujitsu introduced our disaster preparedness and environmental monitoring solutions at events sponsored by GeSI (Global e-Sustainability Initiative) and at the ITU World Conference.

- A side event at the UN Bonn Climate Change Conference (June, Bonn)
- A side event at the UN Climate Summit (September, New York)
- ITU Telecom World 2015 (October, Budapest)
- ITU Green Standards Week 2015 (December, The Bahamas)
- Eco-Products Exhibition, GeSI-sponsored Seminar (December, Tokyo)

Seminar at the Eco-Products Exhibition

FY 2016 Targets and Plans

Leveraging ICT Services to Contribute to Sustainable Societies

The Sustainable Development Goals (SDGs) were adopted in 2015. While Fujitsu's promotion of "GHG emission reduction through the provision of ICT" and the "provision of sustainability solutions" have contributed to achieving SDGs, we have added, from FY 2016, the new objective of "contributing to a sustainable society through provision of ICT services" in Environmental Action Plan (Stage VIII). We are expanding initiatives to develop and provide solutions that, from the SDGs perspective, have value for society and our customers.

In FY 2016, we will test the correlation between these solutions and customers' challenges in meeting the SDGs, and intend to spread the resulting value inside and outside the Company.

Development of Top-Level Energy Efficient Products

Our Approach

As ICT spreads, an increase in energy demand is expected in proportion to the higher performance and higher-density integration of products. Accompanying this, energy-related regulations for ICT products are increasing in various countries and regions, such that energy efficiency is taking on importance within society in the form of energy label conformance and green procurement requirements.

The Fujitsu Group believes that we also must aim to improve the energy performance of products during their use, in order to reduce GHG emissions. Up to now, we have worked to improve the energy efficiency of products through development of "Super Green" products. As we now seek to further increase energy efficiency, in our Environmental Action Plan (Stage VII) we have set a target of making over 50% of all new products top-level energy efficient.

Summary of FY 2015 Achievements

Targets under the Fujitsu Group Environmental Action Plan (Stage VII) (toward FY 2015)	Achieve top-level energy efficiency of more than **50%** of newly developed products.
FY 2015 Targets	Make **50%** or more of new products top-level energy efficient.
FY 2015 Key Performance	Made **52.8%** of new products top-level energy efficient.

FY 2015 Performance and Results

Actively Applied Energy-Saving Technology

We have set targets for the achievement of top-level energy efficiency based on the number of product series that are expected to be developed during FY 2013–15.

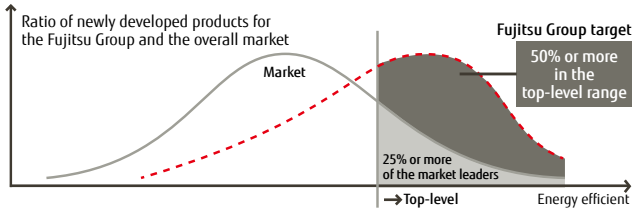
Applications of energy-saving technologies include new, high-efficiency microprocessors and power supplies, energy-saving displays, optimized energy-saving controls, and the strengthening of power management features. In addition to these, we are actively undertaking the aggregation of LSIs and the reduction of components.

Achieved Top-Level Energy Efficiency for 52.8% of New Products

As a result of applying and expanding energy-saving technologies across our divisions in products including servers, PCs, network devices, and imaging devices, we were able to exceed by over 2.8% our 50% target (vs. FY 2015) for new product top-level energy efficiency.

Reference Information Top-Level Energy Efficient Products

Products, beginning with "top-runner" products (first in the world or industry, top of the world or industry), that achieve 25% or more of the market benchmark in energy efficiency.



Reference Information Top-Level Energy Efficient Product Target Standards

Fujitsu sets targets that recognize top-level energy efficiency standards in each product area compared with the market overall or with conventional products.

Example of Target Standards*1

Reference Level	Product Categories
ENERGY STAR criteria (in effect) compliant	PCs, imaging equipment, etc.
Top-level achievement rate of the Top Runner Program (FY 2011) under the Energy Conservation Law	Servers, storage systems, etc.
Industry-leading energy efficiency	LSI, products for specified fields, etc.
Industry's highest-level battery life	Smartphones
Power consumption reductions over prior products/prior performance	Network products*2, electronic components, etc.

*1 Depending on product specifications, standard values differ even for products within the same category.
*2 A larger number of stars designate the top-level, concerning the products which are assessed by Ecology Guideline For the ICT Industry.

FY 2016 Targets and Plans

Deploying Outstanding Energy-Saving Technology and Expanding Its Application

In Environmental Action Plan (Stage VIII), Fujitsu revised the definition of top level products to be "products that meet standards comparable to those at top places in external indicators"and will continue to proceed with top-level product development to achieve our target. In addition, we will deploy outstanding energy-saving technology and expand its application to products. Looking toward the future, we aim to push the development of advanced technology, which will contribute to revolutionary improvements in energy efficiency.

Development of Top-Level Energy Efficient Products

Main Activities in FY 2015

High Performance Servers Able to Operate in 45°C Environments Due to Super Efficient Cooling Design

PRIMERGY RX2540M2

Fujitsu's PRIMERGY RX2540M2 is designed to run in high temperature environments as hot as 45°C. Examples of these cooling features include placing heat-producing components (such as CPUs, memory, and HDD) closer to cooling fans, and using heat sinks as well as power supply units with high cooling efficiency. The power supply unit in the server has received 80 PLUS® Titanium certification. It achieves power conversion efficiency as high as 96% and minimizes power loss and heat from AC/DC conversion. Furthermore, airflow within the server is optimized by using a fan inside the power supply to provide focused cooling for the supply unit.

ASHRAE (the American Society of Heating, Refrigerating, and Air-Conditioning Engineers) has stipulated environmental classes depending on the temperature and humidity ranges for a device's normal operation. Devices operating in 45°C environments fall into class A4, the highest class defined by ASHRAE. Since PRIMERGY RX2540M2 can operate in a hotter environment than previous 35°C models, the new product contributes to energy conservation and reduced CO_2 emissions.

High-Performance Waterproof Tablets with Energy-Saving Designs for Long Battery Life

ARROWS Tab Q736/M

The Windows-equipped ARROWS Tab Q736/M for corporate clients uses the latest Intel® Core™ i processor and an IGZO energy-saving display to achieve approximately 9.1 hours*1 of battery life. The tablet is Energy Star compliant and achieves an energy efficiency rate of 500% or more (vs. FY 2011) based on the Law Concerning the Rational Use of Energy.

Furthermore, by using hybrid molded components made of magnesium alloy and glass fiber reinforced plastic for the internal cover, it was possible to create the sturdy screen while maintaining trimming weight. Post-consumer recycled materials*2 are employed in the glass fiber reinforced plastic. Additionally, the new tablet's internal cover can be reused instead of being disposed of when refurbished. The device's technology includes a fan and heat pipe without sacrificing the waterproof design, thereby enabling efficient cooling of the high-performance internal CPU and also reducing resources used and size.

*1 Measured based on the JEITA battery operating time measuring method (Ver. 2.0); battery life is approximately 15.2 hours when using the additional battery.
*2 Material recovered and reused from post-consumer products.

Developing the World's Smallest and Most Efficient AC Adapter

GaN-HEMT AC adapter

Fujitsu Laboratories Ltd. has developed an AC adapter that allows rapid charging of smartphones and other devices. By using gallium nitride (GaN)*1 High Electron Mobility Transistors (HEMT)*2 (GaN-HEMT) with low dynamic resistance to switching elements, the adapter limits current loss during high speed operation and emits current with optimal timing. When charging from a home outlet, the charging time is approximately one-third*3 that of conventional adapters. The new product is the smallest 12-watt AC adapter (15.6 cm^3) in the world and has a world-leading 87% power supply efficiency.

Use of this AC adapter will help limit wasteful electricity consumption and will contribute to reducing CO_2. Current plans aim to commercialize the product in FY 2017 and promote its use in laptop computers and other devices.

*1 **Gallium nitride (GaN):** A wide band-gap semiconductor material that operates with a higher breakdown-voltage than semiconductor technologies based on previous materials, such as silicon (Si)- or gallium-arsenide (GaAs)-based technologies.
*2 **High Electron Mobility Transistor (HEMT):** A field-effect transistor that takes advantage of operation of the electron layer at the boundary between semiconductor materials with different bandgaps, which is relatively rapid compared to that within conventional semiconductors.
*3 Data vary depending on the device being charged.

Improving the Resource Efficiency of Products

Our Approach

Amid the strains on nature from excessive mining and the depletion of resources, rapid rise and fall of international resource prices, uncertain supply of rare metals, and other growing threats to the sustainability of companies and society, there is also a growing view worldwide of the importance of resource efficiency. An example can be seen in the EU's designation of resource efficiency as a growth strategy and its establishment of the Resource Efficiency Flagship Initiative.

The Fujitsu Group believes in the importance of efficiently using resources in the ICT products that we provide to customers. We have engaged in "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 use of resources. We are making efforts to improve resource efficiency, which is made possible 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 outstanding products that provide customers with benefits including compactness, light weight, and space savings.

Summary of FY 2015 Achievements

Targets under the Fujitsu Group Environmental Action Plan (Stage VII) (toward FY 2015)	Increase resource efficiency of newly developed products by **35%** or more (compared to FY 2011)
FY 2015 Targets	Increase resource efficiency of new products by **35%** or more (compared to FY 2011)
FY 2015 Key Performance	Increased resource efficiency of new products by **44.8%** (compared to FY 2011)

FY 2015 Performance and Results

Improving the Resource Efficiency of New Products

In FY 2012, the Fujitsu Group created its own definition of "resource efficiency" since no official indicator existed.

In FY 2015 as well, we continued to use our indicators in the evaluation of products newly developed by Fujitsu*, while also undertaking initiatives aimed at reducing the number of parts in products and reducing the size of products through smaller, thinner, and lighter parts and higher-density mountings.

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

Achieving 44.8% Improvement in Resource Efficiency

Fujitsu has achieved a 44.8% improvement in FY 2015 resource efficiency, against a target of 35%. This is the result of smaller size and lighter weight, primarily in tablets, PCs, PC servers, mission-critical IA servers, and mobile phone base stations.

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.

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

Environmental burden from resource usage = Σ (Resource burden coefficient x Resource usage volume)

Environmental burden from resource disposal = Σ (Resource burden coefficient x Resource disposal volume)

FY 2016 Targets and Plans

Further Improvements in Resource Efficiency in Our Sights

In Environmental Action Plan (Stage VIII) for FY 2016-18, we have stated the target of " Promoting eco design for resource saving and circulation and increasing resource efficiency of newly developed products by more than 15% (over FY 2014)." Toward achieving this target, Fujitsu is continuing current initiatives, while expanding development of new lightweight, rigid materials and the use of recycled materials. We also seek to widely publicize our products' environmental performance to increase recognition of this factor, which we will link to sales growth.

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."

Improving the Resource Efficiency of Products

Main Activities in FY 2015

Tablet-shaped Handheld Terminal Only 70% the Thickness of Previous Models

FUJITSU Handheld Terminal Patio 720

9.9% resource efficiency improvement (over conventional models)

The FUJITSU Handheld Terminal Patio 720 is shaped like a tablet and ideal for worksite tasks such as placing orders and inspecting products. It features an easy-to-read screen, user friendliness, and a sturdy design, while also being only 18 mm thick (approx. 70% the size of conventional models).

The internal frame, which is the supportive skeleton of the device, was switched from plastic to magnesium alloy in order to make the terminal thinner, yet more robust. Additionally, adopting the Intel Z3745 1.3 GHz (4 core) chip in the CPU greatly reduced the number of components, allowing the double-sided printed circuit board to be concentrated onto a single side.

The battery and external connectors were upgraded as well. The new model adopts a thin, square battery that eliminates unused space. External connectors such as the USB ports have fixed height. Cutting indentations into the printed circuit board allowed the connectors to be seated lower in the board and placed more freely in the vertical plane.

Smartphones Featuring Both Thinner and High Strenghth Designs

arrows NX F-02H

17.1% resource efficiency improvement (over conventional models)

Smartphone "arrows NX F-02H" launched in the winter of 2015, has been reduced the thickness by 0.9 mm (approx. 10%) compared to previous models. In addition to saving the overall parts by 8%,. And this model has used the cutting-edge materials, called nanotech fiber that is as approximately 1.5 times strong as previous resin-based material. As a result, arrows NX F-02H has a greater strength than any other conventional smartphones in spite of thinner design.

The space gained byreducing components enables to put the high-capacity 3390-mAh battery inside. Despite built-in high-resolution display, energy-saving innovations in the display itself and the drawing process minimize battery drain down to the same level as full-HD models. As a result, arrows NX F-02H has been achived the top-notch actual use time, 99.6 hours.*

* Battery life assumes typical smartphone use of approx. 187 min. /day, including app use while charging (NTT Docomo research).

Advancing 3R Design

Through our proprietary product environmental assessments and green product evaluations, the Fujitsu Group is working toward the application of reduced resource usage, improved recyclability, and other technologies that take into account the 3Rs. Examples of the effective resource-saving technologies that we are deploying in our products include reductions in the number of components and cables, performance enhancements, space savings through higher-density integration, and digital product manuals. Furthermore, we are using Fujitsu's own 3-D Virtual Product Simulator (VPS), which is popular with many of our customers during their product design processes, to test the steps involved and the convenience of product assembly and disassembly before creating prototypes.

From 2010, we have also conducted regular study tours for designers at the Fujitsu Group recycling centers. In addition to hands-on experience with dismantling used products, designers gain feedback from staff in charge of recycling through idea exchanges and explanations of the obstacles to ease of dismantling. From FY 2015, the Fujitsu Group has been summarizing examples of the obstacles to ease of dismantling that we have learned from some 90 case studies at 5 recycling centers. Results are distributed in a systematic collection complete with pictures.

Gaining experience in dismantling at recycling center study tour

Research and Development of Advanced Green ICT

Our Approach

The Fujitsu Group pursues its business activities with an aim to solving social and environmental problems by driving forward research and development (R&D) in a multitude of domains. Working from the standpoints of environmentalism and sustainability, we use leading-edge technologies as our foundation and expand outward into materials and devices used in products, as well as facilities and system solutions.

At Fujitsu Laboratories Ltd., the core company shouldering R&D in the Fujitsu Group, two key approaches are being undertaken: "Green of ICT," which seeks to reduce energy and resources consumed by ICT equipment and infrastructure, and "Green by ICT," which seeks to reduce environmental burdens through the use of ICT. Within these approaches, Green by ICT has a significant ripple effect in society and we are aiming to drive green ICT in the domain of Social Innovation, the core of the Fujitsu Group's growth strategy.

Summary of FY 2015 Achievements

Targets under the Fujitsu Group Environmental Action Plan (Stage VII) (toward FY 2015)	**Develop innovative technologies** that enable solutions and products to reduce the environmental loads
FY 2015 Key Performance	Announced **25** key green technologies

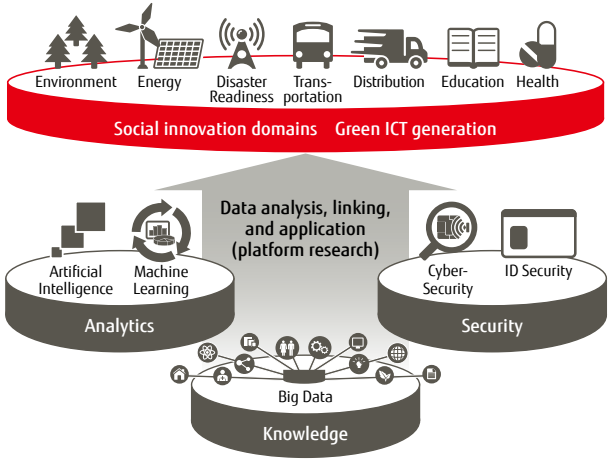
FY 2015 Performance and Results

Positioning and Highlighting Fujitsu Laboratories' Key Green Technologies

To disseminate the Fujitsu Group's advanced green ICT throughout society, and to support its early deployment in businesses, we positioned as our key green technologies "best-in-class" and "world-first" technologies, as well as technologies with notably high environmental contribution. We are also highlighting our technological capabilities by advancing our R&D for these key green technologies and assertively promoting them through press announcements.

In addition, in the domain of creating social innovation, which connects and leverages heterogeneous information such as that generated by corporations, governments, individuals, and sensors, we strengthened our generation of green ICT and communicated its contributions to the environment.

Social innovation research domains in the laboratory



Announcement of 25 Key Green Technologies

In FY 2015, the Fujitsu Group announced 25 technology development achievements, including 18 in the domain of Green by ICT and 7 in the domain of Green of ICT, with the former category comprising 5 achievements in the domain of Social Innovation.

Research Achievements

- Software that analyzes service quality while monitoring transmission at a world-record 200 Gbps
- Web OS technology for easy connections between smartphones and peripheral devices
- Technology that visualizes the complexity of business logic
- Development of virtualization technology that brings security and operability to Web applications
- Development of millimeter-wave wireless devices for 5G networks
- Platform services utilizing IoT data
- Technology for high-speed data transmission from remote sites
- Using supercomputers for real-time disaster-recovery scheduling
- Dispersed device connection technology
- Technology to visualize the energy required to execute software
- Technology for fast, automated setup of virtual networks
- Wireless transmission technology for 5G networks
- Technology to accelerate comprehensive analysis of data
- Ultra high frequency transmission and sensing technologies
- Development of non-insolated 100A DC-DC power modules
- Technology for automatically generating image inspection programs
- Development of the world's smallest and most efficient AC adapter
- Development of touch sensors to capture touch data during Kampo doctor exams
- Technology for predicting potential sewer system overflow from torrential rains
- Development of the world's largest-scale magnetic-reversal simulator for (dysprosium-free) neodymium magnets
- Technology trial to predict the population of Japanese sika deer
- Development of technology to detect "back-and-forth-type" targeted e-mail attacks in real time
- Development of gallium nitride transmitter power amplifiers
- Development of technology for instantaneous searches of a target image from a massive volume of images
- Commencement of a trial to test an output control system for photovoltaic power generation

FY 2016 Targets and Plans

Accelerating Development of Innovative Technologies for Solving Environmental Issues

Fujitsu is accelerating the development of innovative technologies for solving various environmental issues such as energy and work task efficiency improvements for reducing CO_2 emissions, countermeasures for natural disasters, and preservation of biodiversity.

Research and Development of Advanced Green ICT

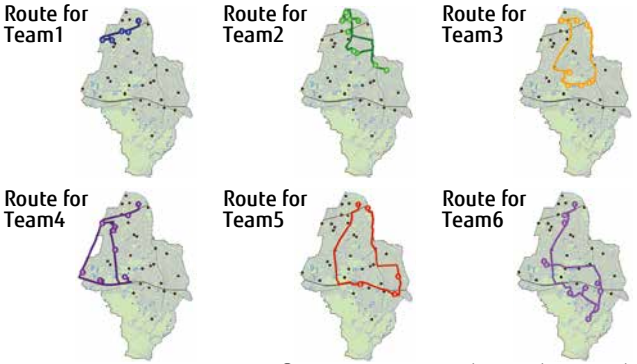
Main Activities in FY 2015

Scheduling Disaster-Recovery with Supercomputers

During a large-scale natural disaster, recovery schedules for essential services, etc. must be formulated quickly. However, since conditions can change even as plans are being formulated, it is difficult to perform the calculations based on massive volumes of data in real time needed to propose an ideal plan that reflects those changing conditions.

Fujitsu Laboratories and the Institute of Mathematics for Industry at Kyushu University have developed a numerical-optimization technology that runs on a supercomputer to efficiently formulate large-scale recovery plans while taking into account complex conditions on the ground, creating real-time scheduling for recovery work. When used with 506 recovery sites and 64 work teams, this technology was able to formulate an appropriate recovery-work schedule in roughly three minutes.

Output result for a case with 37 recovery sites and 6 work teams

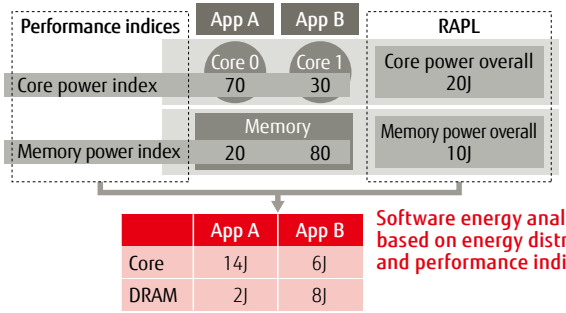


Technology to Visualize the Energy Required to Execute Software

Fujitsu Laboratories Ltd. has developed technology that precisely calculates the energy consumed by software. Servers equipped with Intel-made CPUs can measure power consumption for the CPU as a whole. Until now, however, it was not possible to calculate the energy required to execute software on a core-by-core basis, so it has been difficult to take a software-based approach to reducing power consumption.

Now, Fujitsu Laboratories has developed technology that uses information that can be tracked at the individual core level, such as clock cycles and cache-hit percentages, to estimate energy consumption in detail, down to the program module level. This technology can be used in energy-efficient programming reducing overall server energy usage and, by using spare power and increasing parallelism, boosting software performance.

Software energy analysis based on energy distribution and performance indices



	App A	App B
Core	14J	6J
DRAM	2J	8J

Software energy analysis based on energy distribution and performance indices

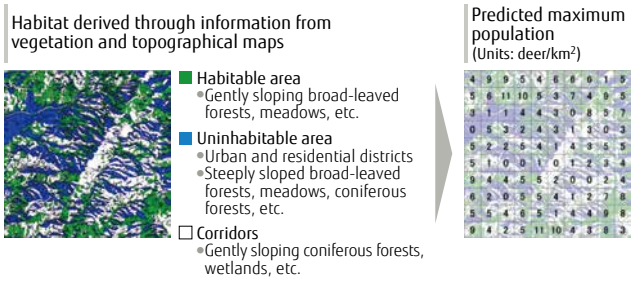
Technology Predicting the Population of Japanese Sika Deer

In recent years, the rapid increase in the population of sika deer has led to forest damage from the deer's feeding habits and there are concerns about a loss of biodiversity. Developing countermeasures requires forecasts on the growth of animal distribution. However, it is difficult for researchers to investigate broad and hard-to-reach areas, which has made surveys challenging.

Fujitsu Laboratories has developed a software technology to predict maximum possible mammal populations without a field survey, using publicly available information, such as vegetation maps that display the types and distribution of plants, topographical maps, and climate information, as well as information about the animal's basic biology. In this trial to apply the technology to sika deer, the habitable areas that are suitable for deer to live are calculated. By applying the relationship between sika deer population density and their weight, the maximum possible population number for each square kilometer area is estimated.

Predictions of maximum Japanese sika deer populations (Koshu region, Yamanashi prefecture)

57,000 m² of habitat are needed for each 60-kg sika deer



Collaborating with Communities and Taking Action as a Good Corporate Citizen

Our Approach

Fujitsu Group deploys its funds, technology (ICT), and people (expertise) to support the activities of NPOs, NGOs, educational institutions, local governments, citizens' groups, and other diverse bodies that seek to resolve social issues. Specific examples include technological support for citizen enlightenment and studies for biodiversity strategies by local governments; funding support for rare species protection by NPOs and global warming countermeasure projects; technological support for monitoring and other systems; and support for human resources participating in the social contribution programs of international institutions. We determine the targets and content of support based on the needs and issues of local communities.

In addition, we support the social contribution activities undertaken by employees, encouraging each and every employee to maintain high awareness of social and environmental issues and to take an active involvement in resolving these.

Summary of FY 2015 Achievements

	Corporate Citizenship: Social Challenges	Corporate Citizenship: Social Activities
Targets under the Fujitsu Group Environmental Action Plan (Stage VII) (toward FY 2015)	Support initiatives that address the complex social and environmental challenges, e.g. biodiversity conservation	With society, support our employees to volunteer social activities
FY 2015 Key Performance	**Funding:** Donated to a children's advocacy center and provided support to disaster areas through the Red Cross **Technology:** Provided software engineering opportunity **Human resources:** Carried out professional training and other activities	Dedicated **169,000 hours** to social contribution activities by employees

FY 2015 Performance and Results

Building a Platform for Sharing Information About Social Contribution Activities around the World

Since FY 2011, the Fujitsu Group has been using its Act Local System to share information about social contribution activities around the world. In the beginning, the system was mainly used inside Japan. In line with promoting Environmental Action Plan (Stage VII), we enhanced the system so that it would be easier to include activity reports from different countries and regions.

Furthermore, we promoted information sharing through use of the system globally by having social contribution managers in each region to encourage one other to start using the platform. The result, with a total of 14 countries posting on the platform, has been an increase in the number of overseas activity reports compared to three years prior.

Act Local System screen

Conducting 169,000 Hours of Social Contribution Activities in Japan and Overseas

Through the provision of funding, technology, and human resources, Fujitsu has worked to address many needs in different regions, including supporting conservation of biodiversity and education for the next generation in Europe, Middle East, India, Africa, and Asia (EMEIA), and local community service in the U.S.A.

Furthermore, in Japan and overseas, employees spent 169,000 hours in social contribution activities, which was 24,000 hours more than last fiscal year.

Over the three years of Environmental Action Plan (Stage VII), our platform and implementation of social contribution activities at many countries and regions has taken hold, such that each part of the organization is proactively carrying out initiatives in FY 2016 and going forward.

Examples of Social Contribution Activities

- **Charity Cycling Event / Fujitsu UK & Ireland**

  The company planned a charity fundraising event in-house and 25 employees cycled 540 miles. The event raised over £2,400, which was donated to Fujitsu's charity partner Action for Children.

- **Support for educational events / Fujitsu Technology Solutions S.A. (Belgium)**

  The company gave tools to experience software development technology at an event attended by 1,200 children.

- **Participation in the Green Corridor Run and Water Challenge / Fujitsu Asia Pte. Ltd. (Singapore)**

  More than 20 employees of the company participated in the Green Corridor Run 2016, which was held in March, while 6 employees and family members took part in the Water Challenge, which was held concurrently and aimed to contribute to improved access to safe water. Through the event, S$1,800 were raised and donated to the NGO Charity: Water.

Collaborating with Communities and Taking Action as a Good Corporate Citizen

Main Activities in FY 2015

Support for Grape Cultivation Using a Multi-Sensing Network

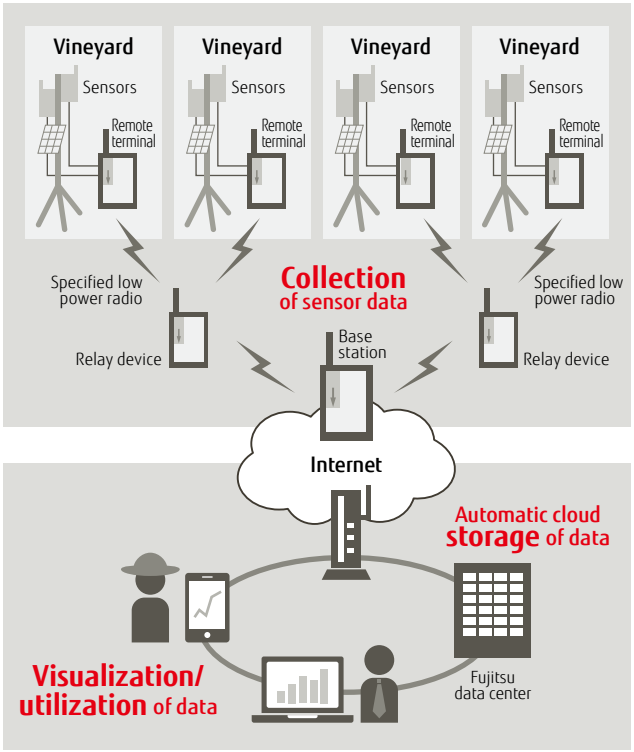
Since June 2011, Fujitsu has been providing a multi-sensing network to Okunota Winery, Inc., which Fujitsu employees visit as part of an agricultural outreach experience. The network automatically collects temperature, precipitation, and humidity data from the vineyard, which helps produce high quality wine. The timing of the grape harvest and careful monitoring of pigment levels are essential for expert viticulture, which is apparently assisted by an understanding of temperature fluctuations in the vineyard. Previously, data collection was managed by manual checking and analysis. Using the multi-sensing system, however, allows constant collection of data in 10-minute intervals every day and night of the year.

Statistical analysis of data collected over four years has identified temperature and humidity conditions that encourage growth of microbes and mold, major detrimental factors to grapes. By configuring the system so that it judges long periods of these temperature and humidity conditions as a dangerous environment, alerts are sent to the smartphones of vineyard staff allowing them to take the necessary disease prevention and pest control countermeasures at the right time. This has led to less frequent sprayings of agricultural chemicals and shorter person-hours for the viticulturists.

Leveraging ICT in this way helps increase the quality management of wine. In August 2015, the winery's Wine Venus Sakurazawa Chardonnay was selected as one of The Wonder 500™ ("local products that are the pride and joy of Japan but not yet known outside of Japan") by the Ministry of Economy, Trade and Industry.

Working with universities and fruit tree research stations in FY 2016, the winary plans to verify the commercialization of this system with the aim of increasing the efficacy of disease prevention and pest control and reducing labor.

Schematic of the multi-sensing network system at Okunota Winery, Inc.



Giving On-Site Environmental Classes to over 10,000 Students

In order to have the young generation of the future understand the importance of the environment, the Fujitsu Group is sending employees to schools as lecturers to conduct on-site environmental classes. In FY 2015, lecturers visited 195 elementary and junior high schools, teaching classes to 12,779 students.

Employee Comment

As more and more companies start sending employees to teach classes as part of their social contribution activities, Fujitsu has started to offer students a class that focuses on environmental issues from the perspective of "craftsmanship."

I have participated in this project because I want to communicate with young students about environmental problems. I want to do this in my own words and from my viewpoint as a manufacturing employee. Each class is enjoyable. Students listen to the instructor intently and many of them respond to questions with a level of rich creativity that adults often miss.

I hope to continue these environmental classes in the future so that students will be encouraged to take action in whatever way they can after thinking more deeply about our planet's environmental challenges.

Jyunichi Misonou
Innovation Business Unit
Fujitsu Limited

Chapter II | Reducing Our Environmental Burden

Amid an upward trend in energy consumption at data centers as cloud services expand in recent years, the Fujitsu Group has set new targets in our Environmental Action Plan (Stage VII) for the promotion of environmental considerations in data centers. In addition, we have set targets that include reduction of GHG emissions from workplaces, business partners, and distribution operations; the effective use of water resources; and expanded use of renewable energy.

Key Achievements in FY 2015

- Greenhouse gas (GHG) emissions Reduced by **34.7%** (compared to FY 1990)
- CO_2 emissions in transport per sales Reduced by **15%** (compared to FY 2014)
- Water use Reduced by **4.6%** (compared to FY 2014)

About Symbols Used ✓ Examined by third-party organization ○ FY 2015 target achieved

	Theme	Target items (targets through the end of FY 2015)	FY 2014 Key Performance	FY 2015 Key Performance		Status	
Our Business	Efficient Business Operations: Reduce Greenhouse Gas Emissions	Reduce greenhouse gas emissions in our business facilities by 20% compared to 1990.	33.1% reduction	34.7% reduction	✓	○	P. 34
	Efficient Business Operations: Energy Intensity	Improve energy intensity in our business facilities over 1% each year.	5.1% improvement	2.9% improvement	✓	○	P. 34
	Efficient Business Operations: Data centers	Improve environmental performance of our major data centers.	Formulated Guidelines for Promoting Environmentally Conscious Data Centers Adopted PUE visualization tools	Approx. 2% improvement in PUE		○	P. 36
	Efficient Supply Chain: Logistics	Reduce by over 1% on average every year CO_2 emissions*1 per sales from transport compared to 2013.*2	13% reduction	15% reduction	✓	○	P. 38
	Efficient Supply Chain: Procurement	Expand activities of reducing CO_2 emissions to all types of suppliers.	Reached 100% of business partners implementing CO_2 reduction or limitation measures	Reached 100% of business partners implementing CO_2 reduction or limitation measures		○	P. 39
	Efficient Use of Resources: Renewable Energy	Increase generation capacity and procurement of renewable energy.	Concluded an agreement to purchase solar generated power in the U.K. Purchased approx. 21,000 kWh of green power	Added the amount of electricity purchased that was generated by hydro power in Finland Purchased approx. 28,000 MWh of green power		○	P. 40
	Efficient Use of Resources: Water	Continue efforts for efficient use of water, e.g. water recycling and water saving.	Water usage: 16,600,000 m^3 (reduced by 10.8% compared to FY 2013)	Water usage: 15,830,000 m^3 (reduced by 4.6% compared to FY 2014)	✓	○	P. 41
Continuous targets*3	Reduced Environmental Impact: Chemicals	Reduce chemical emissions to less than the average level of 2009-2011 (PRTR: 21 tons, VOC: 258 tons).	PRTR: 19 tons; VOC: 219 tons	PRTR: 19 tons; VOC: 201 tons	✓	○	P. 43
	Reduced Environmental Impact: Waste	Reduce the amount of waste to less than average level of 2007-2011 (amount of waste: 31,134 tons). Keep Zero Emission in factories in Japan.	Waste generated: 22,258 tons Achieved zero emissions at domestic business sites	Waste generated: 20,660 tons Achieved zero emissions at domestic business sites	✓	○	P. 44
	Reduced Environmental Impact: Recycling	Maintain over 90% resource reuse rate of business ICT equipment at Fujitsu recycling centers.	94.3%	94.5%	✓	○	P. 46

*1 **Reduce CO_2 emissions:** Calculate emissions of CO_2 equivalence from energy consumption *2 As the initial target was achieved, from FY 2014 the Fujitsu Group has changed the target
*3 **Continuous targets:** Targets to be achieved through business activity because already achieved high level performance.

Reducing Greenhouse Gases (GHG) Emissions and Boosting Energy Intensity at Our Business Sites

Our Approach

The Fujitsu Group is working in every location where it does business to reduce emissions from its own sites, promote the reduction of emissions along its value chain, and contribute to the reduction of emissions by its customers and society overall, in order to help fight global warming, and to do so from a common understanding of the necessity to halve (or cut by 80%, in the case of developed countries) greenhouse gases emitted across the globe by 2050.

The primary GHG emissions from our business sites (plants, data centers, and offices) are CO_2 accompanying energy (electricity, fuel oil, and gas) usage, and perfluorocarbon (PFC), hydrofluorocarbon (HFC), sulfur hexafluoride (SF_6), and nitrogen triflouride (NF_3) used in semiconductor manufacturing. We have set reduction targets for these and are striving to decrease the amounts we use and emit.

Summary of FY 2015 Achievements

Targets under the Fujitsu Group Environmental Action Plan (Stage VII) (toward FY 2015)	Reduce greenhouse gas emissions in our business facilities by	20% (compared to FY 1990)
	Improve energy intensity in our business facilities over	1% (average rate*)
FY 2015 Targets	Reduce greenhouse gas emissions in our business facilities by	20% (compared to FY 1990)
	Improve energy intensity in our business facilities by an average	1% or more (average rate*)
FY 2015 Key Performance	Reduced greenhouse gas emissions in our business facilities by	34.7% (compared to FY 1990)
	Improved energy intensity in our business facilities	2.9% (average rate*)

* Average over three years from FY 2013 through 2015.

FY 2015 Performance and Results

Promoted Reductions of CO_2 Emissions Accompanying Energy Consumption

As CO_2 reduction measures, we continued in FY 2015 energy saving practices with the machinery at each business site (including installing inverters and BAT*-applicable machinery, etc.) optimizing production processes and drive machinery, optimizing office air-conditioning temperatures, saving energy used for lighting and office automation equipment, and promoting visualization and data measurement with regard to energy consumption.

In addition, to reduce emissions of gases other than CO_2 (such as PFC, HFC, SF_6, and NF_3), we are switching to low global warming potential (GWP) gases, and installing abatement systems on production lines.

* **BAT (Best Available Technologies):** State-of-the-art technologies that are available for use and help contribute to reducing GHG.

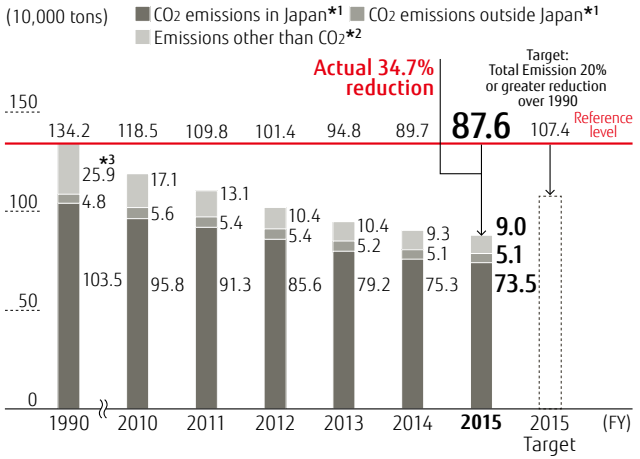
21,000-ton Year-On-Year Reduction of GHG

FY 2015 overall GHG emissions were approximately 876,000 tons (emission rate per unit of sales: 18.5 tons/100 mill. yen), which was a 34.7% reduction compared to FY 1990.

The breakdown of GHG was approximately 786,000 tons of CO_2 (735,000 tons emitted in Japan, 51,000 tons outside Japan) and approximately 90,000 tons of gases other than CO_2.

FY 2015 energy intensity improved 1.5% over FY 2014 while the energy intensity improved an average of 2.9% over three years from FY 2013 through 2015.

Trends in Total Greenhouse Gas Emissions



*1 **CO_2 emissions in/outside Japan:** CO_2 conversion factor for purchased electric power has been calculated with a fixed value of 0.407 tons of CO_2 per MWh since FY 2002 for performance reports in our Environmental Action Plan.
*2 **Emissions other than CO_2:** These are converted to equivalent amounts of CO_2 using the global warming potential (GWP) of each gas.
*3 Our FY 1995 performance is taken to be the same as emissions in FY 1990.

FY 2016-18 Targets and Plans

Achieving Targets under the Environmental Action Plan (Stage VIII)

In Fujitsu's Environmental Action Plan (Stage VIII) covering FY 2016-18, the Company has taken into account the Japanese government's pledge to the U.N. to meet Intended Nationally Determined Contributions of 26% GHG reductions by FY 2030 compared to FY 2013 levels, and we are striving for a greater than 5% reduction (over FY 2013) by FY 2018.

At our data centers and in some of our manufacturing of electronic components, increased CO_2 emissions are projected accompanying increases in energy usage. However, we will continue to invest in facilities and improve operations.

Reducing Greenhouse Gases (GHG) Emissions and Boosting Energy Intensity at Our Business Sites

Main Activities in FY 2015

Using Swirling Induction Type HVAC on Our Semiconductor Wafer Fabrication Line

Mie Fujitsu Semiconductor Limited has added a new production line at the company's Mie plant that uses advanced, environmentally friendly technologies. The cleanroom is equipped throughout with a SWIT® (Swirling Induction Type HVAC System), which will have a smaller environmental footprint than conventional systems while ensuring high-quality manufacturing. This is the world's first use of this technology in wafer fabrication cleanrooms for semiconductors. Compared to existing systems, the annual energy used is expected to be roughly 47% lower for transport power and roughly 32% lower for heat-source power.

SWIT® HVAC system

Fujitsu Augsburg Holds Energy Saving Idea Contest for All Employees

Fujitsu Technology Solutions GmbH (Augsburg, Germany) started an Energy Task Force and held a competition among all company employees to gather energy saving ideas, given that their energy expenses have risen four fold over the past 10 years.

Of the more than 400 ideas submitted through the contest, the best were adopted in FY 2015 and have contributed to energy savings. In particular, the company has become the first in Europe to adopt a flow soldering process with low-temperature solder, which affords a nearly 40% reduction in power usage over the conventional process. The new approach has already been applied in the manufacture of over one million electronic device boards.

Through a variety of energy saving measures, Fujitsu Augsburg has reduced electricity and gas utility costs by one million euros annually and has been able to meet the requirements ahead of time for energy audits stipulated by the EU Energy Efficiency Directive.*

* **EU Energy Efficiency Directive:** a set of binding measures to help the European Union reach its 20% energy efficiency target by 2020.

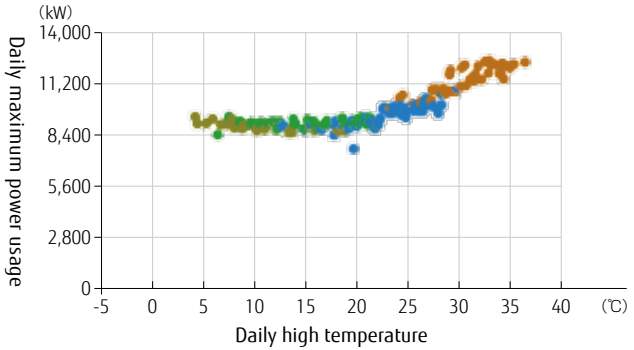
Flow soldering equipment using low-temperature solder

Improving Energy Efficiency through a System Optimizing Contracted Electric Power

The Fujitsu Group has built an Environmental Management Dashboard which has been adopted at all of our business sites in Japan, based on a variety of environmental information collected and analyzed in real time and displayed on a portal screen.

We have now added functionality to optimize electric power contracted through the power utility by visualizing peak period reduction measures and automatically transmitting recommendations. Specifically, the system encourages adjustments to equipment power usage by sending alerts indicating the expected times and amounts of power consumption exceeding the contracted power for the next day. From a graph showing the correlation of temperature and power usage, the system makes recommendations for contracted power for the next fiscal year, and displays the cost. Going forward, Fujitsu plans to utilize this system to promote energy saving and cost reductions at sites Group-wide.

Correlation between temperature and power consumption



Promoting Environmentally Conscious Data Centers

Our Approach

With the spread of cloud computing, energy use by data centers is on an upward trend and society is showing more concern over the environmental performance of data centers. Also, electricity costs are increasing with rising electric utility rates. Data centers comprised 27% of FY 2012 CO_2 emissions in the Fujitsu Group, with emission rates increasing 8.1% over the three years from FY 2010–12 at our 19 main data centers in Japan. Furthermore, our data center CO_2 emissions are expected to continue to rise as our cloud business grows, making environmentally conscious data centers a social responsibility for the Group, as well as a critical theme to address in strengthening our business foundation over the long term.

In the Fujitsu Group, we are targeting* approximately 80% of our data centers (based on server room floor space) and we are working to boost environmental performance.

* **Activity targets:** Global data centers 1,000 m^2 or larger, in principle, or specific data centers requested by data center business units.

Summary of FY 2015 Achievements

Targets under the Fujitsu Group Environmental Action Plan (Stage VII) (toward FY 2015)	Improve **environmental performance** of our major data centers
FY 2015 Key Performance	Improved PUE by approx. **2%** (average rate*)

* Average over three years from FY 2013 through 2015.

FY 2015 Performance and Results

Promoting the Power Usage Effectiveness (PUE)

In executing Environmental Action Plan (Stage VII), and following on from last fiscal year, Fujitsu has promoted the improvement of PUE* at its data centers inside and outside Japan, based on the policies established in the Green Datacenter Committee (GDC). Primary initiatives include improving the cooling efficiency of air-conditioning systems, expanding the hours when external ventilation is used, and maximizing utilization of free cooling options. Results have led to an average improvement of more than 2% over the period from the start of the initiatives unitil FY 2015.

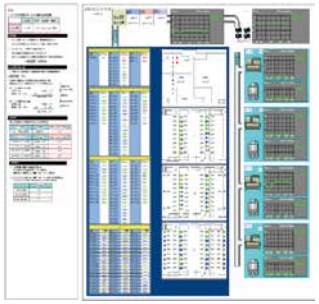
Furthermore, we are endeavoring to make speedy improvements through our Quick Win Approach. No result is unimportant, no matter how small, and this approach helps maintain these annual improvements by building a cooperative framework for sharing ideas at an early stage. Fujitsu has also striven to make improvements as quickly and optimally as possible by gathering data on electricity usage and climatic parameters (temperature, etc.), and by creating a screen that allows for easy comparisons between pre- and post-initiative measurements. This allows us to develop an improvement-oriented environment for maintaining optimal operating conditions while confirming the effects and quality of measures.

* **PUE (Power Usage Effectiveness):** an indicator showing the energy saving performance of data centers. PUE is obtained by dividing the energy usage of an entire data center by the energy usage of its servers and other ICT equipment. A PUE closer to 1.0 indicates better energy efficiency.

PUE Values and PUE Calculation Method

PUE values	PUE calculation method, etc.
Average: 1.63 Range: 1.33–2.10 Applicable DCs: 34 centers	- The Green Grid's method used - Improvement initiatives using the organization's DCMM

Quick Wins Calculator



Screen showing summaries of energy usage and other parameters

FY 2016 Targets and Plans

Formulating Activity Targets

Fujitsu has set a target of "Improving data center PUE by 8% or more (over FY 2013)" in our Environmental Action Plan (Stage VIII) for FY 2016-18. Stage VIII of the plan discloses targets outside the Company and also aims for further expansion of Fujitsu's contributions to customers and society.

Promoting Activities for Achieving Targets

Going forward, Fujitsu will continue efforts to optimize the use of external ventilation, raise air-conditioning temperatures, more thoroughly separate heating and cooling functions, and by doing so, continue to boost energy efficiency. Furthermore, we plan to work on new technologies, including ways to optimize cooling energy with air-conditioning control mechanisms linked to information about interior of ICT equipment. We are working to spread results throughout the Company by reflecting successful examples in our on-going review and revision of our Guidelines for Promoting Green Data Centers formulated in 2015.

Promoting Environmentally Conscious Data Centers

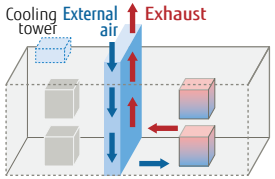
Main Activities of FY 2015

Tatebayashi Data Center Annex C (Newly Built): Environmentally Conscious Design Achieving the Top PUE in Japan

The new annex at Tatebayashi Data Center seeks to optimize its environment for air-conditioning, operations, and ICT equipment. In addition to increasing its use of external ventilation from approx. 3,250 hours to approx. 7,000 hours annually, the center has developed a new building layout and air-conditioning approach that maximally utilizes the natural flow of air. The result is a nearly 60% reduction in power used for air-conditioning and other systems. The center also achieves a PUE of 1.20 (design value), which is at the apex of Japan's standards for power efficiency.

Building Structure

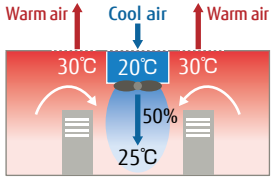
Air ducts are situated in the center of the building as part of a layout that allows efficient release and intake of external ventilation from the roof.



Building layout

New air-conditioning approach

Reduces ventilation fan operation by mixing heat from ICT equipment and external air inside server rooms.



Cutout view of server room
*Temperature example

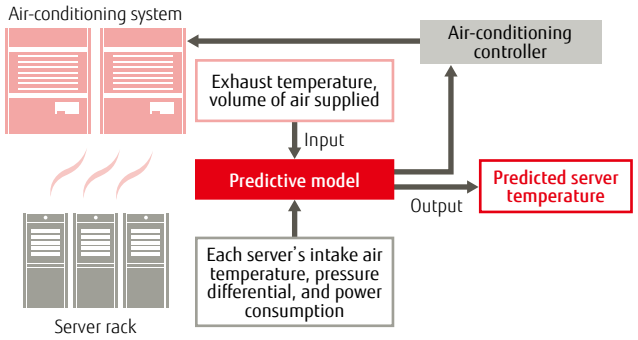

External view of the Tatebayashi Data Center's new annex

Using JIT Modeling in Air-Conditioning Controls at New Data Centers

A cooling control system using Just-In-Time (JIT) modeling was developed to further boost the efficiency of Fujitsu's large-scale data center facilities. This approach to cooling system control leverages temperature, humidity, and power data from the large centers and predicts values for temperature and humidity one hour in the future using JIT modeling. The predictions tell the control system when to switch between multiple air-conditioning units in order to reduce power usage.

Compared to conventional methods, this new approach is expected to yield a 6% reduction in power usage by air-conditioning systems. This prediction is for summer, when the use of external ventilation is most difficult. Annual reductions are estimated at 20% if the same approach is used in winter and other seasons.

Overview of JIT modeling



Data Center Environmental Efforts in Australia

The Fujitsu Group promotes the environmental contribution of its data centers in Australia. As of FY 2015, five out of six sites are certified under the National Australian Built Environment Rating System (NABERS), which is an increase of two over the previous year.

NABERS is the world's first tool that compares the energy use, environmental performance, and efficiency of ICT equipment based on actual performance and is validated by an external government department. It has been applied to buildings in Australia for over 10 years and also includes data centers.

Fujitsu is the only provider of NABERS-certified data centers in each state. These centers are 27% more efficient in power usage than the industry average and deliver savings of 13 gigawatts annually.

NABERS

Reduce CO_2 Emissions from Logistics and Transportation

Our Approach

Given the broad geographical range of Fujitsu Group companies and business sites inside and outside Japan, and the materials/parts sourced from a significant number of business partners, reducing CO_2 emissions accompanying the logistics and transportation activities of the Group is a priority issue.

To this end, the Group has strengthened its targets for CO_2 emission reductions from domestic transport. Furthermore, our Environmental Action Plan (Stage VII) expanded the scope of reductions beyond domestic targets to transport within regions overseas, as well as international transport, while the Plan is also driving forward rationalization and efficiency improvements in global logistics. In addition, the Group is working toward lowering environmental impacts along our entire supply chain, and working on cooperative efforts with business partners, such as displaying copies of the Fujitsu Group Green Logistics Procurement Directions, in order to strengthen our partnerships. Lastly, as an initiative in our distribution process overall, the Group is devoting effort to the 3Rs (Reduce, Reuse, Recycle) with respect to packaging products and materials/parts.

Summary of FY 2015 Achievements

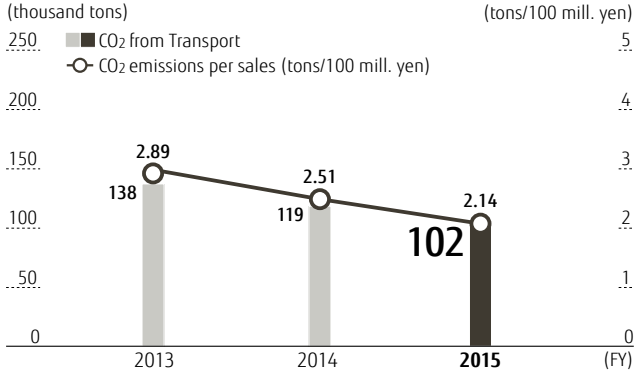
Targets under the Fujitsu Group Environmental Action Plan (Stage VII) (toward FY 2015)	Reduce by over 1% on average every year CO_2 emissions per sales from transport (compared to FY 2013)
FY 2015 Targets	Reduce by over 1% CO_2 emissions per sales from transport (compared to FY 2014)
FY 2015 Key Performance	Reduced by over 15% CO_2 emissions per sales from transport (compared to FY 2014)

FY 2015 Performance and Results

FY 2015 Results Broadly Surpassed Targets

FY 2015 CO_2 emissions from transport were 102,000 tons. Of that amount, 22,000 tons were from domestic transport, while 80,000 tons were from international and overseas local transport. CO_2 emissions per sales were reduced 15% compared to FY 2014 and 13% compared to FY 2013 (on average), which broadly surpassed our Environmental Action Plan (Stage VII) targets for FY 2015.

Trends in CO_2 Emissions from Transport



Promoting Initiatives in Domestic, Overseas Local, and Overseas International Transportation

With regard to the Group's transportation inside Japan, we are continuing to effectively utilize rail transport as an ongoing modal shift initiative, while also adjusting delivery dates and promoting joint transportation with other companies in order to increase truck loading efficiency. The new efforts have led to a decrease in our number of trucks.

In addition, modal shift endeavors are also being implemented in international and overseas local transportation. The Group is shifting from air to ocean transport, shortening transport distances, utilizing low emission vehicles, reducing shipping vehicle numbers by having fewer last-minute, urgent deliveries, and engaging in other efforts such as reducing the number of times air transport is used.

Example Initiatives in FY 2015

- **Promoting joint transportation with other companies (Fujitsu)**
  Fujitsu is promoting joint transportation by combining Fujitsu cargo with the cargo of other companies. Applying to shipments between logistics terminals and from terminals to customers, this collaboration has allowed a reduction in the number of trucks used.

- **Improving truck loading efficiency by adjusting delivery dates (Fujitsu)**
  Collaboration and arrangements within Fujitsu's relevant divisions made it possible to adjust the delivery dates of mobile phones. This adjustment allowed us to reduce the number of trucks used for shipments.

- **Promoting modal shifts; utilizing ferries (Fujitsu Ten Limited, Hyogo prefecture)**
  Fujitsu Ten Limited implemented a modal shift by switching from air to ferry shipments of car navigation systems between our Chinese plant and Japan. Not only do ferries have lower environmental burdens than shipments by air, they also offer lower costs and, compared to using ocean containers, shorter lead times. The result is favorable in terms of both economics and the environment.

FY 2016 Targets and Plans

Pursuing Further CO_2 Emission Reduction

Toward achieving our FY 2016 target to "reduce CO_2 emissions per sales from transport over 2% (on average)," we are promoting CO_2 reduction measures throughout the Group.

Promoting CO_2 Emission Reductions with Our Business Partners

Our Approach

The reduction of CO_2 emissions through society-wide energy saving has become a critical theme for global warming prevention. Fujitsu Group believes that it is necessary to work toward CO_2 emission reductions along its entire supply chain, which is why we advocate measures to reduce or limit the CO_2 emissions of our business partners.

From FY 2013, we are expanding the scope of these measures to encourage business partners beyond component suppliers and to include other areas such as construction, facilities, maintenance, and software. Specifically, we are surveying the status of business partners' activities for CO_2 emissions reduction and offering support and appeals for extra efforts to business partners that do not meet standards set by our Group. Going forward, we intend to leverage the green procurement expertise of the Fujitsu Group to work with our business partners to drive forward initiatives and contribute to decreasing the environmental burden of society overall.

Summary of FY 2015 Achievements

Targets under the Fujitsu Group Environmental Action Plan (Stage VII) (toward FY 2015)	Expand activities of reducing CO_2 emissions to all types of suppliers.
FY 2015 Targets	Reach a **100%** of business partners implementing CO_2 reduction or limitation measures.
FY 2015 Key Performance	Reached **100%** of business partners implementing CO_2 reduction or limitation measures.

FY 2015 Performance and Results

Surveyed Status of Business Partners' Initiatives to Support Their Efforts

The Fujitsu Group has made it an objective to have business partners engage in stage 2 activities (see figure on the right) and we encourage their implementation. Specifically, we conducted a survey of business partners distributing our Group's original environmental survey sheet to our new business partners and checked the status of their activities for reducing CO_2 emissions. For business partners who have not reached stage 2 activities, we provide our own check lists featuring easily actionable case studies as opportunities for partners to start implementing activities.

We also compiled a leaflet that we supply as a guide for activities. The leaflet contains reference information and details on how companies can proceed with regard to global warming issues.

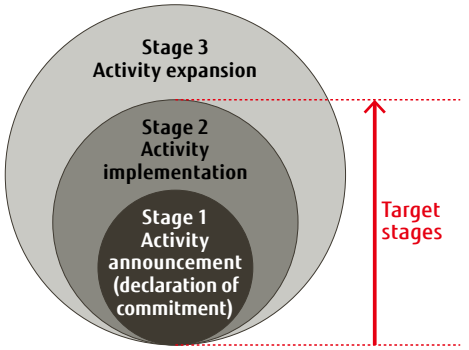
Moreover, we re-confirmed CO_2 emission reduction activities for business partners who had reached stage 2 by the end of FY 2014 and encouraged them to continue those activities.

Leaflet distributed to business partners

Achieved 100% Implementation Ratio with Business Partners Undertaking Initiatives to Reduce CO_2 Emissions

Fujitsu achieved its target of a 100% ratio of business partners undertaking initiatives to reduce CO_2 emission four months early in FY 2015, the final year of Environmental Action Plan (Stage VII). This result was due to unified, Group-wide effort and use of know-how that we accumulated inplementing these activities during FY 2013 and 2014.

Drawing Up an Activity Evaluation Index



Stage 1 Activity announcement (declaration of commitment)	The stage when the significance of reducing/limiting CO_2 is understood and a declaration of commitment is made as a company.
Stage 2 Activity implementation	The stage when initiatives are implemented, each with fixed numerical targets, policies, or plans.
Stage 3 Activity expansion	The stage when activities are expanded from inside to outside the company (such as support for the upstream supply chain or cooperative efforts to review approaches with external organizations).

FY 2016 Targets and Plans

Strengthening Activity Implementation in Our Upstream Supply Chain

In Environmental Action Plan (Stage VIII), Fujitsu is continuing to pursue the objective of "Reducing CO_2 emissions," which is an environmental challenge on a global scale.

In requests to our business partners, we are adding encouragement for them to recommend initiatives to their tier one business partners (i.e., Fujitsu's tier two business partners), and thereby aim to expand this effort in our upstream supply chain.

Through initiatives like these, we hope to broaden the circle of our activities to our entire supply chain.

Increasing Amounts of Renewable Energy Used

Our Approach

Furthering the spread of renewable energy in society has reached a new level of importance from the perspectives of combating global warming, securing stable energy supplies through diversifying our sources of energy, and growing our economy with energy as a pillar of support.

In the Fujitsu Group, we see energy supply and demand issues as one of the links of the fight against global warming. Our Environmental Action Plan (Stage VII) actively aims to expand our use of renewable energy, adopt solar panels at our business sites, and purchase power generated from renewable energy sources.

Summary of FY 2015 Achievements

Targets under the Fujitsu Group Environmental Action Plan (Stage VII) (toward FY 2015)	Increase generation capacity and procurement of renewable energy
FY 2015 Key Performance	Purchased green power: approx. **28,000** MWh Added the amount of electricity purchased that was generated by hydro power in Finland

FY 2015 Performance and Results

Promoted the Purchase of Green Power

We did not install new solar power generation equipment, but maintained our 865 kW of total installed capacity as of the end of FY 2015.

In addition, we purchased approximately 28,000 MWh of green power for our FY 2015 business site operation, exhibitions and events.

TOPICS

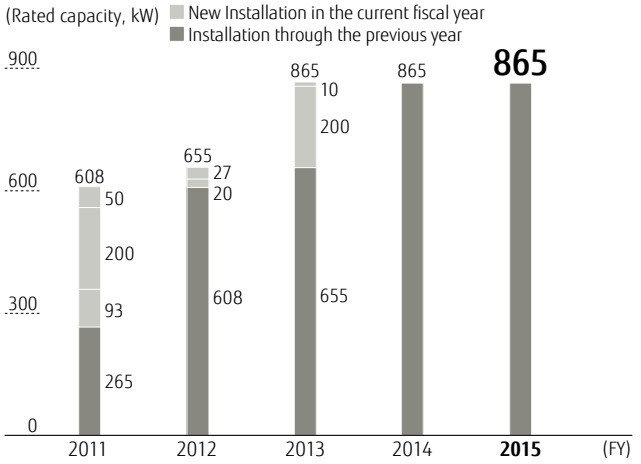
100% Renewable Energy Usage in Finland Data Centers and Offices

At Fujitsu Finland, we have been using 100% renewable energy from hydroelectric power since April 2014 in our 4 data centers, a distribution center, offices and some other facilities.

The amount of renewable energy purchased in FY 2015 was 28,000 MWh.

Green power certificate

Cumulative Total Installed Solar Power Generation (renewable energy)



FY 2016 Targets and Plans

Promote Expanded Use of Renewable Energy

Fujitsu formulated a new Environmental Action Plan (Stage VIII) for FY 2016-18.

We aim to further increase our use of renewable energy by utilizing the Guidelines for Adopting Renewable Energy and the Optimum Installation Maps & Power Generation Estimation Tools, both created in FY 2013, and by reviewing renewable energy adoption at business sites.

We will also strive to continually offset our power usage by actively reviewing the purchase of green electricity from external sources.

Efficient Use of Water Resources

Our Approach

Global water shortage risks are increasing along with climate change, destruction of forests, and economic and population growth in emerging and developing countries. For companies, as well, water shortages bear risks toward business continuity.

Reducing water usage and recycling water are critical issues. Since the Fujitsu Group uses especially large amounts of water in our semiconductor and printed circuit board manufacturing, we believe it is particularly necessary to reduce our water consumption in these areas. In addition to general water saving, to date we have been continuously striving to recirculate and reuse water by recycling pure water and reusing rainwater. From FY 2013, we established efficient water usage as a new goal and have boosted our efforts even greater than in the past.

Summary of FY 2015 Achievements

Targets under the Fujitsu Group Environmental Action Plan (Stage VII) (toward FY 2015)	Continue efforts for efficient use of water, e.g. water recycling and water saving
FY 2015 Key Performance	Water usage: **15,830,000 m³** reduced by **4.6%** (compared to FY 2014)

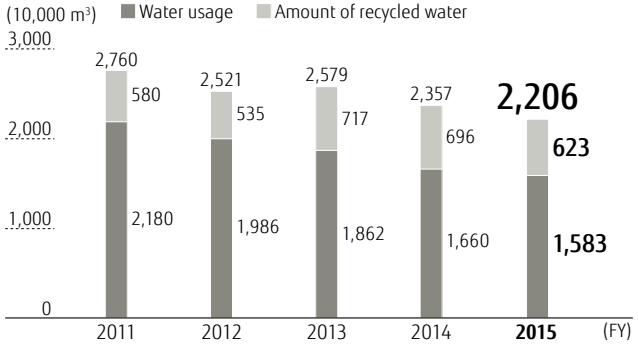
FY 2015 Performance and Results

4.6% reduction in water usage from FY 2014

Water usage for FY 2015 was 15,830,000 m³ (usage rate per unit of sales: 334 m³/100 million yen), which was a 4.6% reduction compared to FY 2014. The proportion of recycled water overall was 39.4%, which greatly contributed to efficient usage.

Each of our business sites has set water usage reduction targets and is working to meet them. Our Nagano Plant, for instance, in addition to promoting measures to increase the collection of raw water with waste water recycling facilities in FY2015, they worked on stabilizing operation and reduced water usage by 36,487 m³.

Trends in Water Usage and Amounts of Recycled Water



FY 2016 Targets and Plans

Work to Achieve the Targets of the Fujitsu Group Environmental Action Plan (Stage VIII)

To pursue our Environmental Action Plan (Stage VIII) goal to "reduce water consumption over 1% in total (128,000m³)," we will combine efforts at each of our plants, one by one, and further endeavor to efficiently use water resources following on from actions in FY 2015.

Efficient Use of Water Resources

Main Activities in FY 2015

Recycling of Production Waste Water Through Green Jishuken

PT FDK Indonesia, which manufactures and sells alkaline batteries, is endeavoring to effectively use water resources on the assembly line.

The assembly line in this factory differs from other production lines in that it has a vacuum process which uses a vacuum pump. Because this process requires a water-cooled system, it uses raw water supplied by the Industrial Park.

This cooling process uses quite a lot of water; about 1,080 m3/month (July-November 2015 average). However, the used water was not re-used and almost the same amount of water was discharged as waste leading to a large cost for water use.

Through Green Jishuken* the factory worked to improve the water-cooled system of the vacuum process in order to solve this problem. By utilizing some equipment that was not being used, and by modifying the open cycle system to be a closed cycle system it became possible to reuse water so the amount of wastewater discharged fell to close to zero. In addition to eliminating the waste of water resources, the cost of raw water consumption was also significantly decreased.

* **Jishuken:** short for Jishukenkyukai (independent research meeting), a meeting to announce the results of independently conducted improvements by each business unit.

The steps of the activity:

a: Install chiller (ex-Blister Film area) and water tank (ex-Cathode Can area)

b: Install electric feeder & connect to the vacuum pump

c : Change water inlet of vacuum pump from raw water feeder to chiller

d: Change water outlet of vacuum pump from drainage to water tank

e: Connect water tank outlet to chiller inlet and pump chilled water to pump inlet

f : Set chiller temperature to 22°C

Major achievements:

1. Reduction of Waste water

   Before: the amount of waste water was almost as much as the use of raw water for the cooling process, approx. 1,080 m^3/month

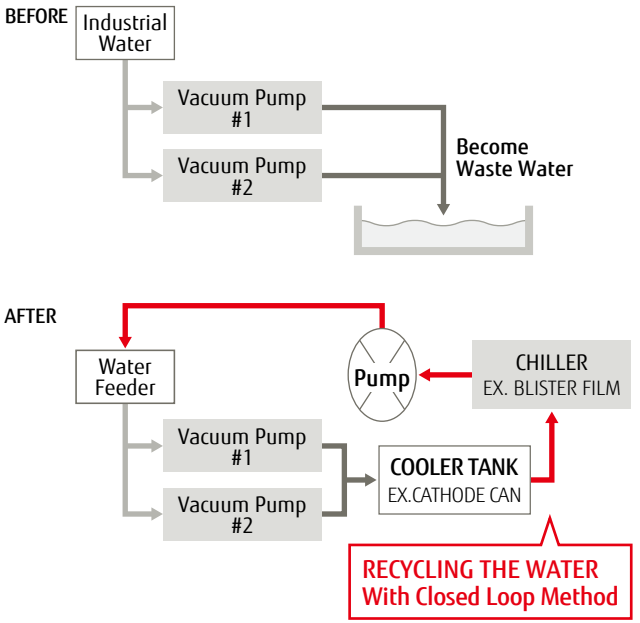
   After: almost no waste water is discharged

2. Economic effect

   Before: cost of water consumption was approx. IDR 16,357,191.8 (USD 1,160)/month

   After: almost zero for water consumption in this process. However, there is the cost of electricity as a consequence of the use of the chiller resulting in a cost saving of around 70%.

Reduction of Water Used by Improvements in the Water-cooled System




Pipe to return water to the chiller (blue pipes)


Close Loop Circulation

Reducing Chemical Substances Emissions

Our Approach

We manage the amounts used for about 1,300 chemicals in the Fujitsu Group in order to prevent environmental risks that could lead to environmental pollution or adverse health effects due to our use of harmful chemical substances. 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 in conjunction with purchasing data and inventory data, and strengthen our management and efficient use of chemicals.

Summary of FY 2015 Achievements

Targets under the Fujitsu Group Environmental Action Plan (Stage VII) (toward FY 2015)	Reduce chemical emissions to less than the average level of FY 2009–2011 (PRTR: 21 tons, VOC: 258 tons)
FY 2015 Key Performance	PRTR: 19 tons / VOC: 201 tons

FY 2015 Performance and Results

Achieved On-Going PRTR Substance and VOC Emission Targets

Group-wide chemical substance emissions for FY 2015 came to 19 tons for PRTR substances and 201 tons of VOC, thanks to efforts that included enhancing our maintenance of recovery equipment.

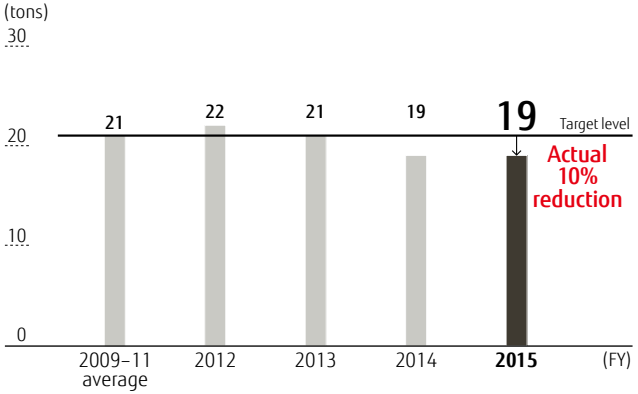
TOPICS

Reducing Chemical Use by Limiting Reuse of Ion-exchange Resin in Pure Water Production Equipment

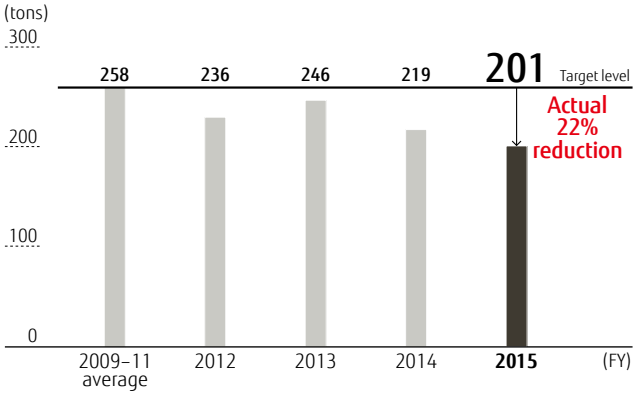
At the Fujitsu Nagano Plant, pure water production equipment is used to supply pure water to the printed circuit board production line. We noticed improvements in the quality of our raw water and have worked to reduce the number of times ion-exchange resins are recycled in the pure water production equipment. This effort reduces environmental burdens by limiting the amounts of chemicals (hydrochloric acid and caustic soda), water, wastewater, and steam used in the recycling process. We are also targeting cost reductions from this approach as well. As part of this initiative, we have exchanged information with the pure water equipment manufacturer and carried out water quality surveys. Our daily checks of the electric conductivity of the raw water and the manufactured pure water have confirmed that there has been no decline in the performance of the ion-exchange resin.

This effort has achieved annual reductions of 89 tons for hydrochloric acid and 200 tons for caustic soda. Along with these lower emissions of chemical substances, the plant has reduced wastewater by 17,000 m^3/year, steam by 185 tons/year, and electricity by 38 MWh/year. The economic benefit has saved 16.49 million yen annually.

Trends in PRTR Substance Emissions in Japan



Trends in VOC Emissions in Japan



FY 2016 Targets and Plans

Continuing to Limit PRTR Substance Emissions

Environmental Action Plan (Stage VIII) includes the target to "Reduce chemical pollutant release to less than the average level of FY 2012-2014 (20.7 tons)." In pursuing this target, Fujitsu will continue to limit PRTR emission levels following on from FY 2015.

Limiting Amounts of Waste Generated

Our Approach

The Fujitsu Group sees waste as a valuable resource and continuously works to recover resources from our waste, or to use that waste as an energy source. In Japan, we have been reducing our final disposal amounts every year. However, given the difficulty of building new disposal sites, and the limited lifespans of existing sites, the environment surrounding our waste disposal is as challenging as ever.

By proactively installing equipment and reusing waste, we are working to follow the stipulations in Japan's Fundamental Law for Establishing a Sound Material-Cycle Society to 1) reduce waste generated, 2) reuse waste, 3) recycle waste, and 4) recover heat from waste. We do this in order to reduce the amounts of waste acid, waste alkali, and sludge generated in our production of semiconductors and printed circuit boards.

Summary of FY 2015 Achievements

Targets under the Fujitsu Group Environmental Action Plan (Stage VII) (toward FY 2015)

Reduce the amount of waste to less than the average level of FY 2007–2011

(amount of waste: **31,134 tons**)

Keep Zero Emission in factories in Japan.

FY 2015 Key Performance

Waste generated: **20,660 tons**

Achieved **Zero Emissions** at Japan's business sites.

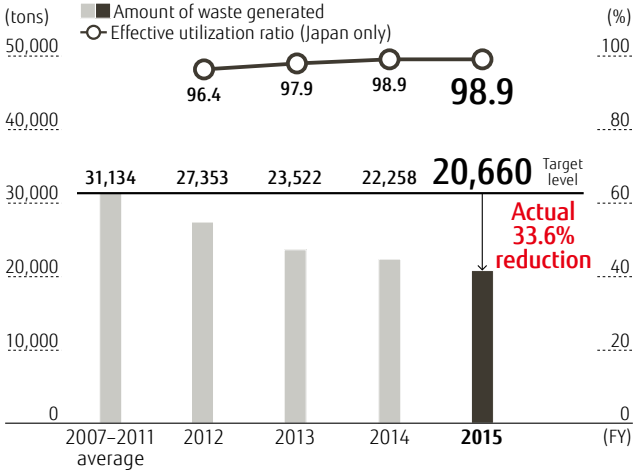
FY 2015 Performance and Results

Reduced Waste Amount and Converted Waste to Value-Added Material

We treated waste flux water in-house at Shinko Electric Industries Co., Ltd., reducing the amount by 114 tons, installed electrolysis equipment to recover copper at our Nagano plant, reducing the amount of sludge generated by 74 tons, converted concentrated organic alkali into value-added material at Aizu Fujitsu Semiconductor Manufacturing Limited, reducing the amount by 41 tons, and converted 12 tons of aluminum evaporation bags into value-added material at Shimane Fujitsu Limited.

As a result, Waste generation was 20,660 tons (generation rate per unit of sales: 0.44 tons/100 mill. yen). Additionally, we were able to maintain zero emissions at all of our Japanese business sites.

Trends in Amount of Waste Generated and Effective Utilization Ratio



Breakdown of Waste Generated, Effective Utilization, and Final Disposal

(tons)

Waste Type	Waste Generated	Effective Utilization	Final Disposal
Sludge	4,425	4,326	99
Waste oil	946	803	143
Waste acid	3,007	3,007	1
Waste alkali	3,073	3,068	5
Waste plastic	3,167	3,097	70
Waste wood	1,042	1,040	1
Waste metal	708	707	1
Glass/ceramic waste	366	363	3
Other*	3,927	3,105	822
Total	20,660	19,517	1,144

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

FY 2016 Targets and Plans

Continue to Limit Waste Generation

Environmental Action Plan (Stage VIII) covering FY 2016-18 includes the target to "Reduce the amount of waste to less than the average level of FY 2012-2014 (25,568 tons)." Following on from efforts that were part of Environmental Action Plan (Stage VII), we are aiming to achieve our low waste target by installing equipment and reusing resources.

Limiting Amounts of Waste Generated

Main Activities in FY 2015

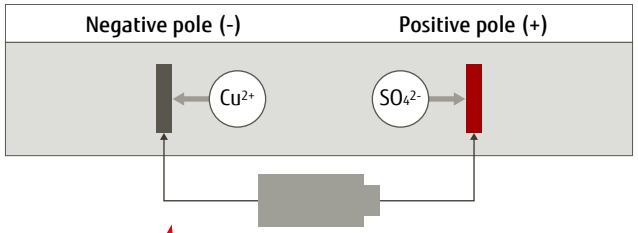
Reducing Sludge Generation by Installing Copper Recovery Electrolysis Equipment

The used stripping solution containing copper emitted during the production of printed circuit boards at our Nagano Plant has a high copper concentration above 30,000 ppm. Since we did not have an independent system for treating this used water, it was being slowly mixed and diluted with low-concentration used water, treated in our existing system and separated into sludge and water discharged into a river.

However, since a large amount of chemicals was needed in proportion to the concentration levels of the water being diluted and treated, there was still an increased amount of sludge being generated. To address this challenge, Fujitsu Facilities Limited looked into whether equipment could be developed that would effectively recover just the copper and reduce the amount of sludge. Attention focused on a copper recovery apparatus that uses electric current to cause a chemical reaction (electrolyzing the used water) so that copper could be removed. Before adopting the system, we borrowed a test device from the manufacturer and experimented with pH, temperature, and treatment time to see how the system would handle used water with different properties released from each building in the plant. With results showing a very high level of purity for the recovered copper compared to other copper recovery equipment, we judged the system optimal for addressing our existing need.

Furthermore, the initiative extended beyond simply installing the system. We collaborated with a water treatment installation company to review an integrated system that included moving raw water from used water tanks, pre-treating used water, and recovering copper. We were able to build an original, fully automated system at our Nagano plant. Installing this equipment has brought annual industrial waste reductions of 74 tons and has allowed us to decrease the types and amounts of chemicals we use.

The principle of electrolysis

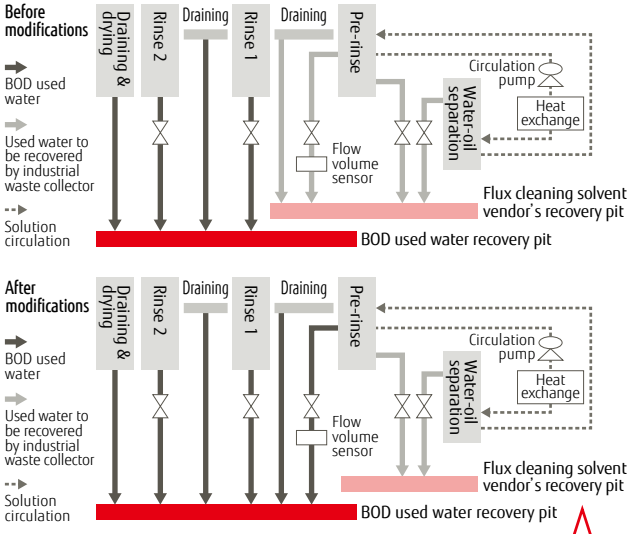


Passing voltage through the chemical compound (used water) triggers an oxidation reaction at the anode and a reduction reaction at the cathode thereby producing positively charged copper at the cathode.

Reducing Flux Used Water by Making Changes to Pipes

At Shinko Electric Industries Co., Ltd., we treated all of the flux wastewater used for cleaning circuit boards as industrial waste. By managing intake and release water so that the used water from cleaning is connected to a BOD used water recovery pit, we have been able to create in-house treatment technology. Taking care of treatment on site has led to a reduction in the amount of industrial waste by 114 tons/year.

Re-routing Flux Cleaning Water with an Electrical Conductivity Control System



The in-house treatment system takes wastewater that has been drained or has passed through the flow sensor and re-routes it to a BOD used water recovery pit instead of the cleaning solvent vendor's recovery pit.

Product Recycling

Our Approach

The Fujitsu Group's product recycling programs are based on our belief in Extended Producer Responsibility (EPR) and Individual Producer Responsibility (IPR). EPR holds that producers bear responsibility for products not only at the design and manufacturing stages, but also at the disposal and recycling stages, while IPR holds that producers bear responsibility for their own products. IPR is a major challenge for the Fujitsu Group in expanding our business globally, but we believe that responding to this challenge, and that of EPR, in collaboration with industry associations and governments will enable us to help create a recycling-minded society in which the requirements and demands of all stakeholders are met.

Given this understanding, the Fujitsu Group carries out recycling programs that comply with the waste disposal and recycling laws and regulations of the various countries in which it operates. As an authorized operator under the Industrial Waste Wide-Area Recycling Designation System based on Japan's Act for Promotion of Effective Utilization of Resources, Fujitsu accepts industrial waste for appropriate processing at Fujitsu recycling centers across Japan. Furthermore, following our belief in IPR, we also try to do as much collection, reuse and recycling as we can, even in countries where recycling is not obligatory.

Summary of FY 2015 Achievements

Targets under the Fujitsu Group Environmental Action Plan (Stage VII) (toward FY 2015)

Maintain over **90%** resource reuse rate of business ICT equipment at Fujitsu recycling centers.

FY 2015 Key Performance

Achieved resource reuse rate of business ICT equipment at Fujitsu recycling centers

94.5% [Japan 92.0% / overseas 98.6%]

FY 2015 Performance and Results

Promoted Recycling of ICT Products

In Japan, the Fujitsu Group has built a recycling system that covers the entire country. While ensuring thorough traceability and security, we are steadfastly implementing Extended Producer Responsibility by providing safe and secure services that achieve high resource reuse rates in order to promote the recycling of ICT products.

Achieved a 90% or Higher Reuse Rate

We processed 5,203 tons of recycled ICT products (used ICT products for business applications) from corporate customers and achieved a resource reuse rate of 92.0%. Also, we have now collected a total of 69,801 end-of-life PCs from individual customers.

Trends in Resource Reuse Rates of End-of-Life Business ICT Products

FY	2012	2013	2014	2015
Resource reuse rate* (%)	91.5	91.3	90.9	92.0
Amount processed (tons)	5,297	5,035	5,016	5,203

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

Trends in Numbers of End-of-Life PCs Collected from Individual Customers

FY	2012	2013	2014	2015
End-of-life PCs collected (units)	85,381	98,549	103,276	69,801

FY 2016 Targets and Plans

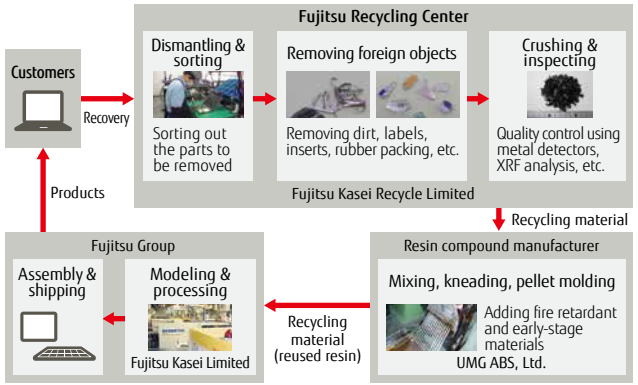
Strive to Continually Achieve Our Targets

Going forward, we will strive to maintain a 90% or higher resource reuse rate for business ICT equipment at our Fujitsu recycling centers, and will drive forward our domestic and overseas recycling programs.

TOPICS Building a Closed Process Recycling System

Fujitsu has built a closed process recycling system that takes the plastic housings of PCs collected at Fujitsu Group Recycling Centers and uses them to make chassis of mobile devices.

When building the system, we checked information about materials in previous products, surveyed and analyzed devices, and used a risk management database to understand the chemical content of PCs with plastic from different organizations and manufacturers. By doing so, we complied with regulations on chemical substances in products. Furthermore, we carefully dismantled units, separated parts by hand, and used thorough inspection with analytic instruments. The system provides our products with high value-added re-used material that is stronger and more fire retardant than the original material, while also avoiding cost increases. Switching to the closed process recycling system has reduced our usage of raw plastic material and is expected to bring an approximately 14% reduction in CO_2 emissions during the production to modeling processes for plastic chassis material.



Environmental Management

Since our founding in 1935, the Fujitsu Group has made the initial concept of "operating in harmony with nature" our cornerstone.
We have now set "In all our action, we protect the environment and contribute to society" as our corporate value under the FUJITSU Way.
Contributing to the sustainability of the planet is a social responsibility of the Fujitsu Group and a reason for our existence.
We will build relationships of trust with a wide range of stakeholders and will work to preserve the environment throughout our value chain.

Evaluation by Outside Institutions

The Fujitsu Group has earned praise from external institutions for its active promotion of environmental and social initiatives, and has been included among Socially Responsible Investment (SRI) brands.

Recognition: Dow Jones Sustainability Indexes (World, Asia Pacific)
Evaluating institution: Dow Jones & Co., RobecoSAM AG

Recognition: FTSE4Good Index Series
Evaluating institution: FTSE Russell

Recognition: oekom Corporate Rating
Evaluating institution: oekom research AG

Recognition: Morningstar Socially Responsible Investment Index
Evaluating institution: Morningstar, Inc.

Recognition: UN Global Compact 100
Evaluating institution: U.N. Global Compact

Environmental Management

Endeavoring to make sustainable improvements to environmental management systems based on ISO14001, the Group is promoting unified environmental management.

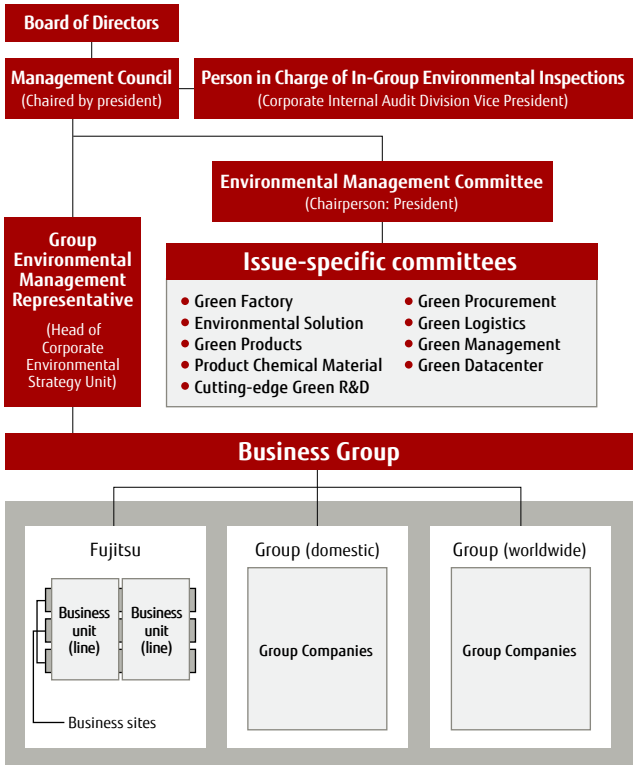
Environmental Management Framework

To conduct a comprehensive discussion of the Fujitsu Group's environmental management, we have established an Environmental Management Committee chaired by the president. This committee is considering medium-term issues, implementing policy decisions, and discussing methods for handling and sharing operating risks and opportunities from climate change, all with the aim of raising the level of the group's environmental management and strengthening its governance. Based on that, final decisions on environmental management at the Fujitsu Group are made at meetings of the Management Council and reported to the Board of Directors.

Subordinate to the Environmental Management Committee, we have organized environmental issue-specific committees composed of concerned parties that go beyond the framework of business groups and headquarters. Through this promotion structure, we are making it possible to quickly diffuse initiatives on these issues throughout the group.

We have also established an Environmental Management Working Group subordinate to the Green Management Committee that is working to unify global information transmission and strengthen environmental management systems (EMS) activities.

Environmental Management Framework (as of March 2016)



Configuration and Operation of 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 EMS construction 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 the end of FY 2015, the Fujitsu Group has acquired global integrated ISO 14001 certification for a total of 78 companies of Fujitsu and its domestic group companies, as well as for 10 overseas Group companies. Our 13 overseas consolidated subsidiaries that are not production base sites have constructed and are operating an EMS in line with Fujitsu Group environmental policies. In this way, we have established an environmental management structure across the whole Group.

Environmental management systems operational status

		FY 2013	FY 2014	FY 2015
Internal audit	Findings	218	148	130
External audit	Findings	3	5	2
	Opportunities for improvement	70	89	82
Environmental compliance	Violations of environmental laws	3	5	6

Environmental Management

Internal Audit Implementation and Results

The Fujitsu Group is carrying out internal audits, a requirement of ISO 14001. To ensure the objectivity and independence of internal audits, the Corporate Internal Audit Division, takes the lead, allocating internal auditors who belong to Fujitsu or Fujitsu Group companies and carries them out.

In FY 2015, we carried out internal audits for factories, offices, and other facilities at 501 sites in Japan and 19 overseas. For these audits, we scrutinized the results of the FY 2014 internal audit and external audit and found four major focal points: (1) compliance, (2) operational control, (3) objectives and targets, and (4) organization operating original EMS. As a result, there were 130 findings, which, with a lower number each year, suggests that our environmental management system has taken hold.

Domestically, about one third of findings involved operational control, many of which were related to methods for managing chemical substances. Overseas, receiving cooperation from external experts thoroughly knowledgeable in local laws and regulations and operation, we carried out internal audits with the objective of strengthening compliance. Regarding the content of the findings, more than 50 percent related to "legal and other requirements" and "operational control."

An internal audit being conducted overseas

External Audit and Results

To maintain our ISO 14001 certification, we are carrying out external audits by a certifying body. In FY 2015, 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, 50 areas, for our organizations in Japan, and 32 areas, for our overseas Group companies, were pointed out as opportunities for improvement. Two minor nonconformities were identified at our overseas entities. We have completed corrective actions against these matters as of the end of FY 2015. Moreover, external audit findings on these were shared throughout the Group in order to help efforts to prevent recurrences.

These audits were carried out, and as a result of the judgment of the two certifying bodies, we were again granted renewal of our ISO 14001 certification.

Status of Environmental Compliance

While the Fujitsu Group committed no major violations of environmental laws and caused no accidents that had any major impact on the environment in FY 2015, there were six events in which laws were violated. They consisted of three violations related to water quality and three related to industrial waste.

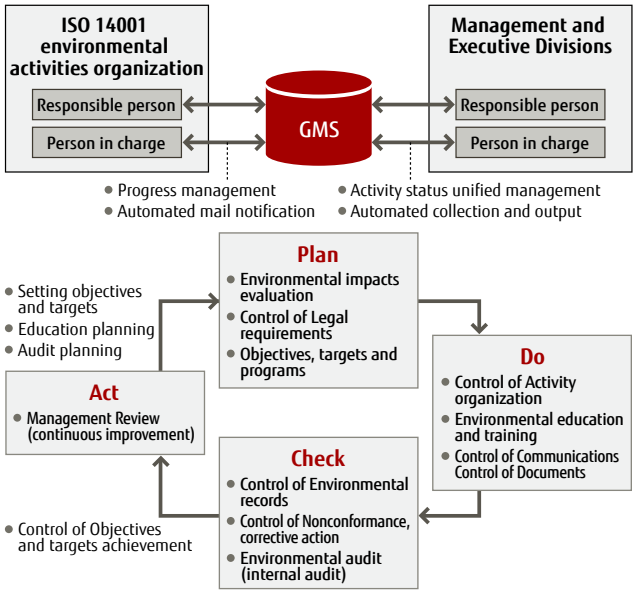
Legal violations continued to be few in number through our efforts toward the horizontal sharing of information on findings, but we will aim to make our self-checks even more thorough and bring the number of violations to zero. Also, with regard to industrial waste, we will select outstanding waste processors while configuring a structure to eliminate administrative violations related to waste from offices.

Use of 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, and to monitor the situation involving improvements to, and legal compliance with: nonconformance issues notified at environmental audits, communications activities, direct and indirect effects and risk/countermeasure levels identified in environmental impact assessments, and the setting of environmental management objectives and targets.

This enables corrective measures and objectives to be soundly managed, and effectively ensures continual improvement of the activities with reduced risks.

ISO 14001 Green Management System



Green Procurement

To provide customers with products and services that have a light environmental footprint, we are implementing green procurement in concert with our business partners.

Procurement Activities Based on Green Procurement Direction

The Fujitsu Group summarized what it asks of its business partners in Japan and overseas regarding purchasing green parts, material and products in the "Fujitsu Group Green Procurement Direction". We have summarized green procurement requirements (table below) for our business partners and promote procurement from business partners that fulfill these requirements.

Using a Fujitsu Group Environmental Survey Sheet, we conduct a survey on business partners' status with regard to environment management system, CO_2 emission reduction, biodiversity preservation and water resource preservation activity, and ask them to take appropriate measures.

Green procurement requirements for business partners

Requirements	Materials/parts business partners*	Non-materials/parts business partners
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 Aquatic resource preservation initiatives	○	○

*** Materials/parts business partners:** Business partners who supply components of Fujitsu Group products or OEM/ODM products

Establishment of Environmental Management Systems

We request our business partners to establish environmental management systems (EMS) to ensure that they continuously implement environmental burden reduction activities. In principal, we would like them to have third party certified EMS. Where this is not possible, we ask them to build an EMS incorporating the PDCA cycle suited to their circumstances.

CO_2 Emission Reduction Initiatives

The Fujitsu Group asks our business partners to actively engage in CO_2 emission reduction, in response to climate change represented by global warming. Specifically, we ask them to clearly express the intentions of their initiatives and request that they make efforts to achieve the objectives they set. Furthermore, we ask them to collaborate with external organizations, where possible, and to similarly encourage their own suppliers so that initiatives are expanded outside their business.

Acquiring Information on Chemical Substances Contained in Products

The Fujitsu Group is investigating information on chemical substances contained in suppliers' products by using AIS*1 and MSDSplus*2 offered by JAMP.*3 The investigations take place when products are designed, designs are changed or business partners are changed, and information gathered is shared through our internal chemical substance information management system.

Also, we are proactively participating in activities to standardize investigations related to green procurement promoted by JAMP and others.

***1 AIS (Article Information Sheet):** Information sheet for information on chemical substances in molded products.
***2 MSDSplus (Material Safety Data Sheet plus):** Information sheet for information on chemical substances in chemicals and preparations.
***3 JAMP:** Joint Article Management Promotion-consortium

Establishment of a Chemical Substance Management System (CMS) for Product Substances

The Fujitsu Group asks its business partners to establish a chemical substances management system (CMS) based on industry-standard JAMP guidelines on the management of chemical substances contained in products.

We carry out CMS audits where Fujitsu's auditors directly confirm the management of chemical substances in products at the business partner's manufacturing bases, and if the system established is inadequate in structure or operation, auditors make requests for corrections and provide support. Afterwards, we regularly confirm the system state and its operational status through periodic audits. With the understanding of our business partners, the Fujitsu Group will continue carrying out management of chemical substances included in products.

Initiatives to Minimize Environmental Risk

To minimize the risk, the Fujitsu Group is continuing such initiatives as setting voluntary control values that are tougher than those designated by laws and regulations throughout the entire value chain.

Environmental Pollution Prevention and Preparations for Climate Change Risks

We are preparing rules that designate a response to accidents and emergency situations in case of the rare occurrence of environmental risks and educating employees on how to carry them out correctly. Additionally, there is the 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. We have formulated a business continuity plan and are devoting effort to continually revising and improving the plan.

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 made to appropriately process dust and soot, sulfur oxide, nitrogen oxide, and other harmful substances, and reduce emissions. Furthermore, we are reducing the atmospheric discharge 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 fluorocarbon leakage.

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

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 regular measurement and monitoring on this basis. We recover and recycle chemicals used in production processes, instead of discharging them into wastewater. And we are working to reduce discharges of harmful substances and other regulated substances (COD, BOD, etc.) by ensuring appropriate chemical use, preventing chemical leaks and permeation, and properly managing the operations of water treatment and purification facilities, among other measures.

Preventing Pollution of Soil and Groundwater

We have established rules for soil and groundwater surveys, measures and disclosure. 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 disclosing information in concert with administrative agencies.

As of FY 2015, there are seven 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-lifting aeration, etc. (See Page 59.)

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 the original Chemical Information System called "FACE" and working to appropriately control and reduce emissions at our business sites. (See Page 43.)

Furthermore, with regard to chemical substances included in products, we have determined banned substances and are working to thoroughly control them, including both inside the company and with business partners. (See Page 50.)

Appropriately Processing Waste

In order to confirm that subcontractors are appropriately handling the waste processing tasks we entrust to them, we regularly carry out on-site audits.

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 carries out PCB waste interim storage and disposal under government supervision, and are carefully carrying out processing based on JESCO plans.

Conserving Biodiversity

In FY 2009, we settled on the Fujitsu Group Biodiversity Action Principles, and promote them based on the two pillars of reducing the impact of our activities on biodiversity and contributing to the creation of a society that conserves biodiversity.

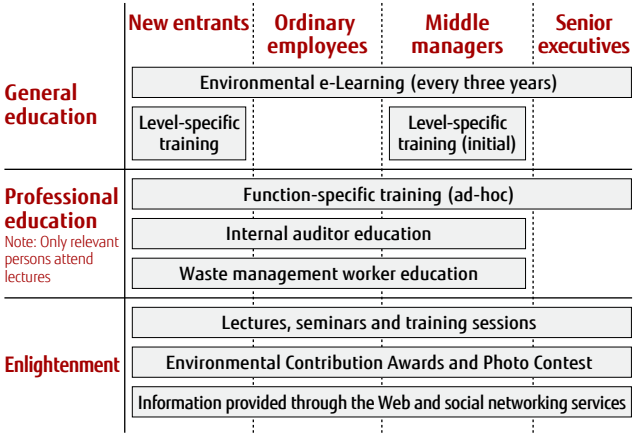
In-House Environmental Educational and Enlightenment Activities

We carry out various forms of environmental education and enlightenment training based on the belief that, "to promote environmental management, it is essential to raise the environmental awareness of each and every employee and to take proactive measures."

Carrying Out Comprehensive Environmental Education

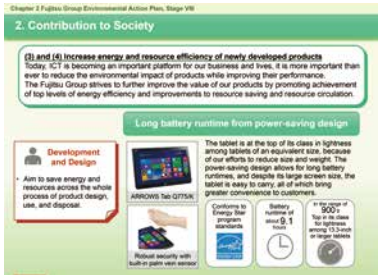
At the Fujitsu Group, every three years we have all of our employees undertake e-Learning to acquire a basic understanding of environmental management. In addition, education is provided to meet the needs of each level of employee from new entrants to managers, as well as those of departments including design development, sales and systems engineering. We are also implementing internal auditor, waste management and other training as professional education for employees in charge of work related to the environment.

Fujitsu's Environmental Education System



Promoting Environmental e-Learning for all Group Employees

The Fujitsu Group offers environmental e-Learning to all of its employees. The purpose of the training is to have employees understand the Group's environmental management, to encourage employees to take active initiative toward environmental awareness in their work tasks, and to facilitate the spread, recognition, and implementation of our Environmental Action Plan. In FY 2016, the first year of Environmental Action Plan (Stage VIII), we plan to newly implement environmental e-Learning.



Environmental e-Learning screen

Raising Awareness Through an In-House Award Scheme

To raise the environmental awareness of employees at all Fujitsu Group companies, we have operated an Environmental Contribution Awards scheme and conducted an Environmental Photo Contest, open to all employees, every year since 1995.

Numerous entries for the FY 2015 Environmental Contribution Awards were put forth along the three themes of "Environmental contribution to customers and society through our products, solutions, and services," "Reducing the negative environmental impact of our business activities," and "Social contribution activities." Three submissions, including "Collaborating to Build Low-Carbon Urban Environmental Buildings," were awarded the Environmental Contribution Award.

For the Environmental Photo Contest, 402 entries were received from Fujitsu Group employees across the globe. This contest, through the solicitation of entries and voting for winners, encourages employees to think of environmental problems from a global perspective.

Winners of the Environmental Grand Prize

1. **Collaborating to Build Low-Carbon Urban Environmental Buildings**
   A facility management system was adopted at a commercial-use building. Collaboration between business owners, facility managers, tenants, and builders implemented on-going energy saving measures after construction.

2. **Broad Power Consumption Reductions with the Renewal of *arrowhead***
   The renewal of the Tokyo Stock Exchange's arrowhead trading platform added robust stability and environmental contributions from reduced power consumption to the system's world-class reliability and operating capacity.

3. **Striving for Japan's Top Energy Saving Features at the Tatebayashi Data Center**
   The data center has developed Japan's first technology for reducing the energy needed to cool server rooms, which comprises the majority of energy consumed at data centers, and has built annexes equipped with Japan's top energy saving features.

Environmental Photo Contest Top Prize Winner " We are NATURE"

The work incorporates the message to "Protect forests! Humans are a part of nature!"

Communication with Society

The Fujitsu Group works to communicate with our customers, employees, business partners, shareholders, investors, local and international communities, and all of our diverse stakeholders.

Environmental Dialogues with Experts

In order to boost environmental management that reflects the changes and needs of society, the Fujitsu Group believes that it is important to have many occasions for dialogue with a wide range of stakeholders and to build relationships of assured trust.

Group environmental dialogues are one part of this effort. Experts have been invited in far ranging fields, including representatives of NGOs, universities, and media organizations, to engage in dialogues on diverse themes centered on the environment.

Insights Provided by On-going Effort

The environmental dialogues started from a desire to build strong ties through mutual communication between our Company and society. The first dialogue was held in FY 2011, with a total of 25 dialogues held up to January 2016 and discussions have been held with a total of 80 experts.

Consistently holding the talks has given Fujitsu many valuable insights into Group initiatives and information communication. These discoveries have come in sizes large and small. For example: information, such as business philosophies, background details, motives, and other fine point that cannot be completely conveyed by our website and press releases is important information for understanding Fujitsu; aspects of ICT that we inside the Company consider to be common, are actually not common; and there are specific things that society hopes for from us.

FY 2015 Themes

1st dialogue The environmental materiality of Fujitsu

2nd dialogue Examining the supply chain from the perspective of environmental awareness

3rd dialogue Natural capital management

4th dialogue How corporations can address SDGs (Sustainable Development Goals)

5th dialogue Global risks and opportunities in light of the COP21 discussions

The 25th environmental dialogue held in January 2016

Toward the Next Generation, through Cooperation and Co-Creation

There are examples of new initiatives growing out of the opportunities created by the environmental dialogues.

One example is an environmental education program called "Living With the Resources of One Plant" that is taught at elementary and junior high schools across the Japan. This grew out of environmental dialogues with the World Wildlife Foundation (WWF). This program is aimed at teaching students about the relationship between resources and people's lifestyles. The approach used by the class, however, employs tablet PCs as a result of repeated discussions on how to leverage "Fujitsu's unique identity." This development led to a program that allows students to study both ICT and the importance of natural resources.

Fujitsu Group employees served as instructors for the classes, which took place for approximately 200 groups across Japan (primarily elementary and junior high schools) and approximately 12,800 students in FY 2015.

Using tablet PCs in the environmental education class

From a single dialogue, a bond was formed between our company and society, with cooperation and co-create helping to show the way toward the next generation. Fujitsu aims to continue dialogues, with even deeper interaction, in order to build the future together with society.

Comments from One of the Facilitators

This fiscal year's environmental dialogues again covered a variety of themes. I think that it is really wonderful that these dialogues with society continue. Compared to the themes up to last fiscal year, the topics have become more advanced. They continue to be concrete while also finding new inroads to fields that will be important to Fujitsu and society going forward. The network of experts invited to participate in the talks has also grown broader.

I am truly encouraged by the fact that the number of employees from different divisions who take part in the dialogues has also increased. Having employees outside the Corporate Environmental Strategy Unit actively come in contact with other perspectives not only leads to present and future merits, but also has the long-term educational benefit of positively changing the company from the inside. I have heard that these repeated dialogues with society have led to a variety of actual business opportunities and new ideas and I am happy that the seeds of progress are also steadily sprouting within the company.

With the environmental dialogues entering their fourth year, they have come to a total of 25 dialogues. Some of them have also been held in English and I expect that there will be further and deeper growth. As a forum for continually considering what is "truly global environmental management," and for sake of creating the future together with society, I have great expectations for the environmental dialogues, which I think will take on a more and more important role going forward.

Junko Edahiro

Professor, Faculty of Environmental Studies, Tokyo City University
President, Institute for Studies in Happiness, Economy and Society

Tie-ups with External Organizations in order to Spread Green ICT and a Sustainable Society

By actively participating in external organizations inside and outside Japan, the Fujitsu Group is endeavoring to promote and spread green ICT solutions for realizing a sustainable society.

Major Participating Organizations

World Business Council for Sustainable Development (WBCSD):
reviewing assessment indices in traffic and transportation fields, and promoting concrete solutions in various categories

Global e-Sustainability Initiative (GeSI) :
contributing to SMARTer2030, a report comprehensively analyzing the potential of ICT to bring about sustainability

The ITU-T's ICT and Climate Change Group (SG5 WP3):
spreading and expanding green ICT

ISO TC286 SC1 (Smart Urban Infrastructure Metrics):
building infrastructure assessment methods and promoting efforts to clarify the role of ICT in smart communities

The Steering Committee for the ICT Sector Guidance to the GHG Protocol Product Life Cycle Accounting and Reporting Standard:
assessing ICT life cycle environmental effects

Global Taskforce on Harmonizing Global Metrics for Data Center Energy Efficiency:
promoting environmental consciousness of data centers

Uptime Institute Network:
taking part in surveys and meetings for improving data center performance and efficiency

JEITA Green IT Committee:
contributing to the establishment of a method for evaluating the contributions of products and services

TOPICS

Participating in a Panel Discussion with GeSI and Addressing the Potential of ICT

In December 2015, Luis Neves, chairperson of the Global e-Sustainability Initiative (GeSI), visited Tokyo for the Eco-Products 2015 exhibition. Along with Fujitsu and two other participants, Mr. Neves joined a panel discussion addressing the potential of ICT. Fujitsu also introduced case studies of ICT solutions contributing to the mitigation of climate change.

The panel discussion attended by Fujitsu employee (right)

Communication through Exhibitions and Events

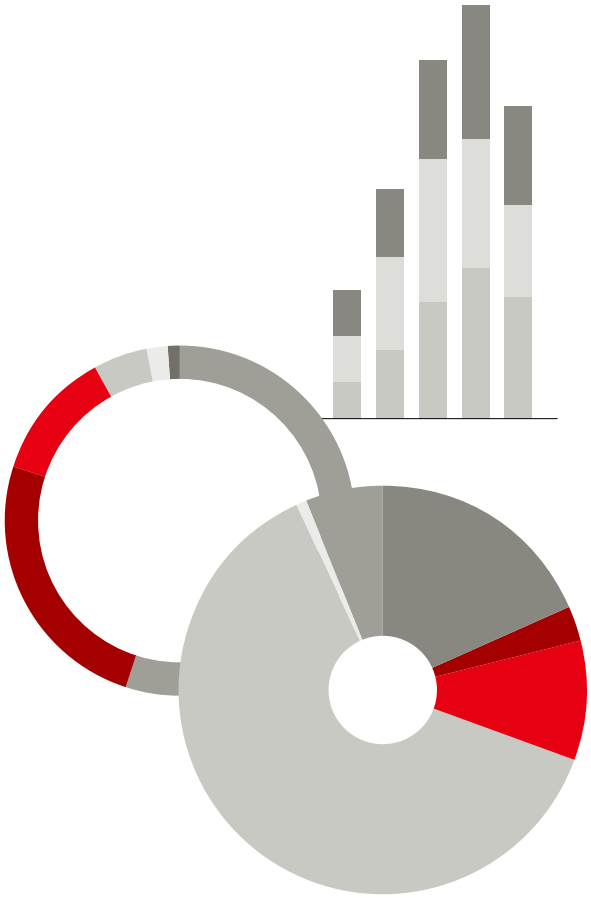
The Fujitsu Group provides information on our initiatives toward solving global environmental issues by using exhibitions and events inside and outside Japan as a means for communicating with customers and residents of regional communities.

Main Exhibitions and Events Attended in FY 2015

- ITU Green Standard Week / Nassau, Bahamas / December 2015
- Eco-Products 2015 / Tokyo, Japan / December 2015
- Kawasaki International Eco-Tech Fair / Kanagawa, Japan / February 2016

The Fujitsu Group booth at Eco-Products 2015

Data Overview



Environmental Accounting

Fiscal 2015 Breakdown of Results (Capital investment, costs, economic benefits)

Item		Main areas covered	Cost (billion yen)		Economic benefits (billion yen)
			Capital investment	Expense	
Business area costs / benefits	Pollution prevention costs/ benefits	Air/water pollution prevention, etc.	0.73 (+0.41)	4.34 (-0.43)	6.26 (-0.50)
	Global environmental conservation costs/benefits	Global warming prevention, saving energy, etc.	0.65 (-0.01)	2.94 (+0.08)	1.81 (-0.11)
	Resource circulation costs/ benefits	Waste disposal, efficient utilization of resources, etc.	0.00 (-0.06)	2.36 (-0.04)	10.24 (-0.87)
Upstream/downstream costs/benefits		Collection, recycling, reuse, and proper disposal of products, etc.	0.02 (-0.00)	0.85 (+0.02)	0.44 (-0.07)
Administration costs/benefits		Provision and operation of environmental management systems, environmental education of employees, etc.	0.03 (+0.01)	2.70 (+0.04)	0.29 (-0.09)
R&D costs/benefits		R&D on products and solutions that contribute to environmental protection, etc.	0.20 (+0.18)	41.23 (+3.32)	71.26 (+5.75)
Social activity costs		Donations to, and support for, environmental groups, etc.	0.00 (-0.00)	0.03 (-0.00)	–
Environmental remediation costs/benefits		Restoration and other measures related to soil and groundwater contamination, etc.	0.00 (-0.02)	0.08 (+0.01)	0.00 (+0.00)
Total			**1.63 (+0.51)**	**54.54 (+3.00)**	**90.31 (+4.10)**

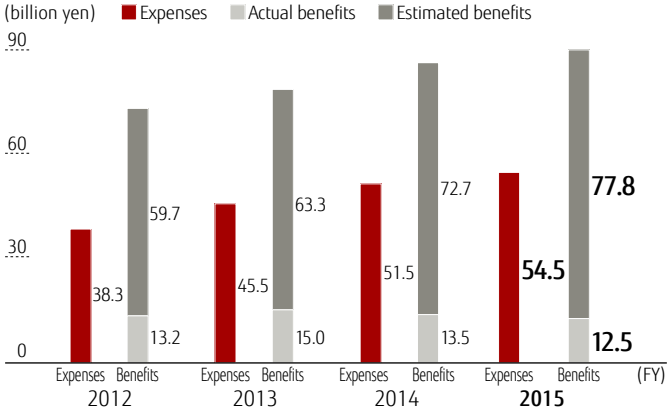
* Numbers in parentheses indicate increases or decreases in comparison with the previous year. Due to rounding, figures in columns may not add up to the totals shown. Items shown as "0.00" include items for which the value was smaller than the display units used.

Costs and Economic Benefits in FY 2015

The results of this accounting for FY 2015 showed expense of 54.5 billion yen (a 6% increase from the previous year) and the economic benefits were 90.3 billion yen (a 5% increase from the previous year). Thus both costs and benefits increased. Also, our capital investment was 1.6 billion yen (a 45% increase from the previous year).

Driving forward our R&D on products and solutions to contribute to environmental conservation for customers and society led to broad increases in R&D costs and economic benefits (calculated by our own method for estimating economic benefits).

Trends in Expenses and Economic Benefits



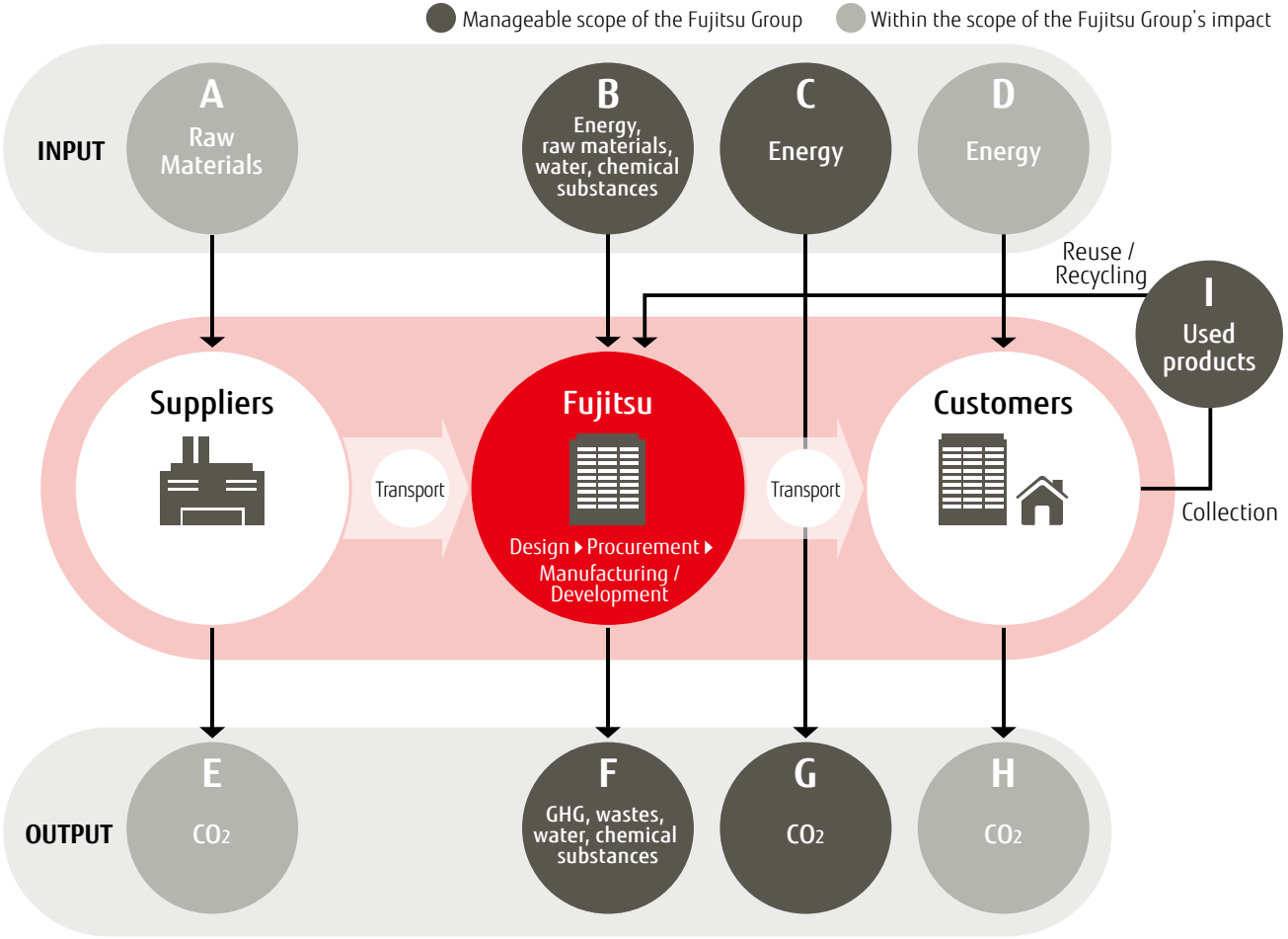
Environmental Liabilities

Our Liabilities toward the Environment

The Fujitsu Group, in properly forecasting expected future environmental liabilities and communicating our soundness and stance of not deferring environmental liabilities, has recorded a liability of 8.48 billion yen in soil-pollution cleanup costs, high-level polychlorinated biphenyl (PCB) waste disposal costs, and asbestos processing costs during facilities demolition. This total is the amount we calculate, as of the end of FY 2015, to be necessary for the Fujitsu Group in Japan to carry out these tasks in the next FY and beyond.

Material Balance

Fujitsu depicts the overall image of our environmental impacts using numbers, in order to engage in business activities with the environment in mind.



FY 2015 Key Performance

INPUT

A·B | Design/Procurement/ Manufacturing/Development

Raw Materials	
Metal	18 ktons
Plastic	9 ktons
Others	15 ktons
Chemical Substances*	
VOCs	1.3 ktons
PRTR	9.7 ktons
Water	
Water usage	15.83 Mm³
Energy	
Total	18.37 PJ
Purchased electricity	1,680 GWh
Heavy oil, kerosene, etc.	8,590 kL
LPG, LNG	3,454 tons
Natural gas, city gas	29.92 Mm³
District heating and cooling	42 TJ

C | Distribution/Sales

Energy	
Fuel (light oil, gasoline, etc.)	1.50 PJ

D | Usage

Energy	
Electricity	7,898 GWh (77.64 PJ)

I | Collection/Reuse/Recycling

Resources recycling rate	94.5%
Amount processed	5,203 tons

OUTPUT

E·F | Design/Procurement/ Manufacturing/Development

Raw Materials	
CO_2 emissions	630 ktons-CO_2
Chemical Substances*	
VOCs	212 tons
PRTR	10 tons
Atmospheric Release	
Total GHG emissions	876 ktons
CO_2	786 ktons-CO_2
GHG other than CO_2 (PFC, HFC, SF_6, others)	90 ktons
NOx	103 tons
SOx	108 tons
Water Discharge	
Wastewater discharges	14.08 Mm³
BOD	397 tons
COD	160 tons
Waste	
Amount of waste generated	20.7 ktons
Thermal recycling volume	4.6 ktons
Material recycling volume	14.9 ktons
Disposal volume	1.1 ktons

G | Distribution/Sales

Atmospheric Release	
CO_2	100 ktons-CO_2

H | Usage

Atmospheric Release	
CO_2	4,410 ktons-CO_2

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

GHG Emissions Report based on GHG Protocol Standards

Materials purchase ▶ Transportation initiated by Fujitsu ▶ Production ▶ Value chain transportation ▶ Waste

Scope 3 Upstream

- **Purchased goods and services** — Materials, components, etc. — 2,317 ktons
- **Capital goods** — Building construction — 82 ktons
- **Fuel- and energy-related** — Not included in Scopes 1 and 2 — 68 ktons
- **Transportation and distribution** (Upstream) — Product distribution, etc. — 102 ktons
- **Waste generated in operations** — Industrial waste treatment, etc. — 8 ktons
- **Business travel** — Use of public transportation — 107 ktons
- **Employee commuting** — 76 ktons
- **Leased assets** (Upstream) — Building use — 123 ktons

Scopes 1, 2 Reporting company

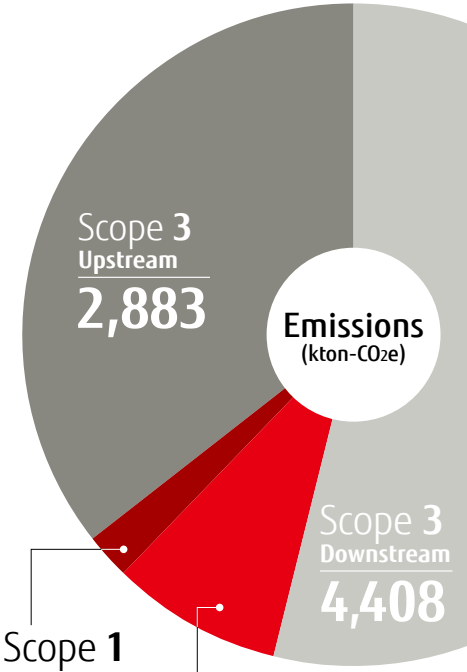
Scope 1
Direct emissions
Burning, etc. of fossil fuels
189 ktons

Scope 2
Indirect emissions from energy sources
Use of purchased electricity
Use, etc. of purchased steam
686 ktons

Scope 3 Downstream

- **Transportation and distribution** (Downstream) — Not covered
- **Processing of sold products** — Not covered
- **Use of sold products** — Products' electricity consumption — 4,407 ktons
- **End-of-life treatment of sold products** — PC recycling (and other) — 1 kton
- **Leased assets** (Downstream) — The Company's business is not applicable.
- **Franchises** — The Company's business is not applicable.
- **Investment** — The Company's business is not applicable.

Covered
Not covered
The Company's business is not applicable.



Supplementary Data

Business Sites Where Soil or Groundwater Contamination Has Been Found

Site Name (Location)	Cleanup and Countermeasure status	Monitoring Well Maximum Value (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.	Cis-1, 2-dichloroethylene	6.0	0.04
Oyama Plant (Oyama City, Tochigi Prefecture)	We are continuing to clean up VOCs by pumping and aeration.	Cis-1, 2-dichloroethylene	17.172	0.04
		Trichloroethylene	0.486	0.03
Nagano Plant (Nagano City, Nagano Prefecture)	We are continuing to clean up VOCs by pumping and aeration.	Cis-1, 2-dichloroethylene	0.066	0.04
Suzaka Plant (Suzaka City, Nagano Prefecture)	We have constructed an underground impervious wall and are continuing processing pumped water.	Polychlorinated biphenyl	0.0026	Must not be detected
Fujitsu Optical Components (Oyama City, Tochigi Prefecture)	We are continuing to clean up VOCs by pumping and aeration.	Cis-1, 2-dichloroethylene	0.173	0.04
		Trichloroethylene	0.218	0.03
FDK Sanyo plant (Sanyo-Onoda City, Yamaguchi Prefecture)	We are continuing to clean up VOCs by pumping and aeration.	Trichloroethylene	0.049	0.03
FDK Energy (Formerly the FDK Washizu Plant) (Kosai City, Shizuoka Prefecture)	We are continuing to clean up VOCs by pumping and aeration.	Cis-1, 2-dichloroethylene	0.52	0.04
		Trichloroethylene	0.16	0.03
		Tetrachloroethylene	0.029	0.01

Energy Use (Scope 1 and Scope 2)

Category	Energy use
Total	18.37 PJ (387.7 J/100 million yen)
Scope 1	1.81 PJ
Scope 2	16.56 PJ

Response to Environmental Complaints (FY 2015)

Complaint	Cases	Response
Noise (noise pollution from machinery breakdown)	6	Implemented noise abatement measures; provided explanations to local residents.

Fujitsu Group Profile

Company Name: Fujitsu Limited

Addresses:
- Kawasaki Main Office
  4-1-1 Kamikodanaka, Nakahara-ku, Kawasaki-shi, Kanagawa 211-8588, Japan
- Headquarters
  Shiodome City Center 1-5-2 Higashi-Shimbashi, Minato-ku, Tokyo 105-7123, Japan

President: Tatsuya Tanaka

Established: June 20, 1935

Main Business Activities:
Manufacture and sale of communications systems, information processing systems, electronic devices, and the provision of services related to those products

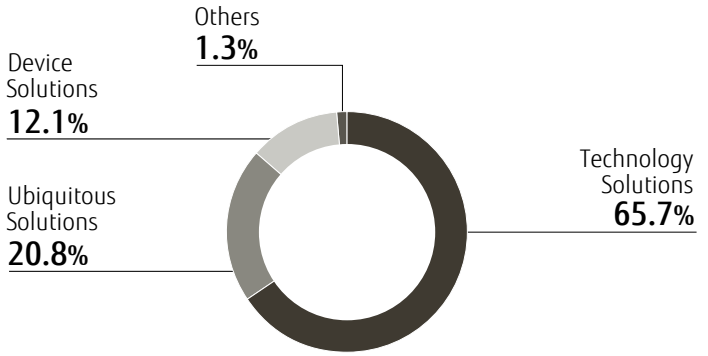
Capital: ¥324.6 billion

Net sales: ¥2,006.83 billion (Fujitsu only), ¥4,739.24 billion (consolidated)

Employees: 156,000 (as of March 31, 2016)

Directors: 12

FY 2015 Consolidated Net Sales by Business Segment



Environmental Performance Data Calculation Standards

Subject Period: April 1, 2015 – March 31, 2016
Scope: Fujitsu and the Fujitsu Group (For details, refer to the List of Companies Covered by the Report on Environmental Activities.)

Chapter I Contribution to Society (Fujitsu Group Environmental Action Plan (Stage VII) "Contribution to Society")

Target Item	Indicator	Unit	Calculation Method
Contribute to reducing cumulative greenhouse gas emissions from customers and society by 38 million tons or more	Reduce greenhouse gas (GHG) emissions through the provision of ICT	Tons	Calculated by multiplying annual sales of each solution category by a conversion factor of CO2e (carbon dioxide equivalent) savings per unit of sales, which is based on case studies of Environmentally Conscious Solutions in Japan.
Make 50% or more of new products top-level energy efficient	The percentage of new products that are top-level energy efficient	%	The percentage of top-level*1 energy efficient products with respect to the number of product series that are expected to be developed. *1 Top-level energy efficiency: Achieve more than 25% of the market benchmark in energy efficiency, on a par with "top-runner" products (first in the world or industry, top of the world or industry).
Improve resource efficiency of new products to 35% or higher versus FY 2011.	Rate of improvement of resource efficiency of new products	%	The average rate of improvement of resource efficiency*1 (versus FY 2011) of products. *1 Hardware products, under the Fujitsu brand, newly developed in FY 2013–15. Excludes products not designed by Fujitsu (OEM products) and products designed under customer specifications. *Refer to "Improving resource efficiency of new products" for the resource efficiency calculation method.
With society, support our employees to volunteer in social activities	Hours of social contribution activities by employees	Hours	Overall contribution hours = Σ participants*1 × activity hours *1 For events organized by the Fujitsu Group, participants also include employee families, stakeholders, etc.

Chapter II Pursuing Internal Reforms (Fujitsu Group Environmental Action Plan (Stage VII) "Pursuing Internal Reforms" "On-going Management Targets")

Target Item	Indicator	Unit	Calculation Method
Reduce greenhouse gas emissions from business sites to 20% below, or lower than, FY 1990 levels.	GHG emissions	Tons CO_2	CO_2 emissions: ∑{(Electricity, fuel oil, gas, and district heating and cooling annual usage) × CO_2 conversion factor for each type of energy*1} *1 CO_2 conversion factor: The factor is based on sources including an energy and industrial process subcommittee report (related to fuel) issued under the auspices of an investigative committee on greenhouse gas emissions conversion calculation methods organized by the Japanese Ministry of the Environment in FY 2002. In FY 2002 and later, the conversion factor for electricity is 0.407 tons CO_2/MWh (fixed). The conversion factor for district heating and cooling is 0.061 tons CO_2/GJ.
			GHG emissions other than CO_2: Annual emissions of HFCs, PFCs, SF_6, and NF_3 at three semiconductor plants (Mie Fujitsu Semiconductor Limited, Aizu Fujitsu Semiconductor Wafer Solution Limited, and Aizu Fujitsu Semiconductor Manufacturing Limited). ∑{Annual emissions for each type of gas*1 × Global warming potential for each gas*2} *1 Based on the calculation method used by the industries of electrical and electronics: Amount of each gas used (or purchased) × Reactant consumption rate × Removal efficiency, etc. *2 Global Warming Potential (GWP): IPCC (Intergovernmental Panel on Climate Change) Third Assessment Report "Climate Change 2001."
	Percentage reduction in total greenhouse gas emissions	% reduction	(Total GHG emissions in FY 1990 – Total GHG emissions in the fiscal year) / Total GHG emissions in FY 1990 × 100

Target Item	Indicator	Unit	Calculation Method
Improve energy intensity at our business sites by 1% or more each year on average over three years from FY 2013–2015.	Rate of improvement of energy intensity	%	The improvement rate, year on year, for each business site's energy rate index is a weighted average of the proportion to the site's overall energy usage. These values are added to calculate our total improvement rate. Σ{% improvement year-on-year in each business site's rate index × wt% proportion of overall energy usage} Target business sites: Japan (energy management plants specified under the Act on the Rational Use of Energy), UK and Australia offices
Reduce CO_2 emissions per sales from transport over 1% (on average) compared to FY 2013.	CO_2 emissions per sales from transport	Tons/100 million yen	Transport CO_2 emissions/sales (100 million yen)
	Reduction rate of CO_2 emissions compared to FY 2013	% reduction	(FY 2014 transport CO_2 emissions per sales - FY 2015 transport CO_2 emissions per sales) / FY 2014 transport CO_2 emissions per sales x 100
Expand activities for reducing CO_2 emissions to business partners in all fields.	The proportion of business partners at or above stage 2 activities (the implementation of CO_2 reduction and minimization activities with numerical targets)	%	The proportion, with respect to all major business partners, of business partners implementing activities at or above stage 2
Increase generation capacity and procurement of renewable energy.	Adoption of solar power generation	kW	Total rated capacity of solar power generation facilities installed at business sites
	Amount of green power purchased	MWh	Among of green power purchased for business site operation, exhibitions and events
Continue efforts for efficient use of water, e.g. water recycling and water saving.	Water usage	m^3	Annual use of clean water, industrial water, and groundwater (Not including groundwater extracted for purification or used for melting snow)
	Amount of recycled water	m^3	Annual amount of water used for manufacturing and other purposes, then recovered, processed, and used again for manufacturing and other processes
Reduce chemical emissions to less than the average level of FY 2009–2011. (PRTR: 21t, VOC: 258t)	Emissions of substances subject to VOC emissions restrictions	Tons	For the 20 VOCs (Volatile Organic Compounds) specified in the environmental voluntary action plans of the four electrical and electronic industry associations*1, total amounts released are provided for those substances handled in quantities exceeding 100 kg annually at individual business sites.
	Volume of PRTR-targeted substances	Tons	For 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 business site.
Reduce waste to less than the average level of FY 2007–2011. (Waste generated: 31,134 t)	Amount of Waste Generated	Tons	Total amount for industrial waste and general waste generated by factories and offices (Thermal recycling volume + Material recycling volume + Disposal volume)
	Effective utilization ratio (Japan only)	%	(Amount of effective use (thermal recycling & material recycling) / amount of waste generated) × 100
Maintain over 90% resource reuse rate of business ICT equipment at Fujitsu recycling centers.	Resource reuse rate of business ICT equipment	%	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.

*1 **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 Liabilities

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

GHG Emissions Report based on GHG Protocol Standards

Indicator		Unit	Calculation Method
Upstream (Scope 3)	Purchased goods and services	Tons	Components purchased during the fiscal year × Emissions per unit of purchases (Source: Embodied Energy and Emission Intensity Data (3EID) published by the National Institute for Environ mental Studies Center for Global Environmental Research)
	Capital goods	Tons	Monetary value of capital × Emissions value per unit of capital value (Source: Embodied Energy and Emission Intensity Data (3EID) published by the National Institute for Environmental Studies Center for Global Environmental Research)
	Fuel and energy – related activities 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 × Emissions per unit (Source: Basic Guidelines for Calculating Greenhouse Gas Emissions Via Supply Chains and the Carbon Footprint Communication Program Basic Database Ver. 1 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. The fuel economy method (for some vehicles) or the improved ton-kilometer method (vehicle, rail, air, ship).
		Tons	International transport/overseas local transport: transportation ton-kilometers × 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 × 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 × Emissions per unit) (Source: Basic Guidelines for Calculating Greenhouse Gas Emissions Via Supply Chains Ver. 2.1 and Emissions per Unit Database Ver. 2.1 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: As above) For portions of commute by private automobile: Σ (Transported persons-kilometer × Emissions per unit) (Source: As above) Transported persons-kilometer is 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 in Japan × Emissions per unit of fuel oil, gas, electricity, and heat consumed (Source: Act on Promotion of Global Warming Countermeasures - GHG Emissions Accounting, Reporting, and Disclosure System)
Reporting company (Scopes 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 emissions (CO_2 emissions) from business sites" in the Environmental Action Plan (Stage VII).
	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 emissions (GHG emissions other than CO_2) at business sites" in the Environmental Action Plan (Stage VII).
Downstream (Scope 3)	Use of sold products	Tons	Electricity consumption during product use × Emissions per unit of electricity (Source: Actual emission factor for each electricity utility based on ministerial ordinances on calculation and adjusted emission factor for each electricity utility based on reporting orders, announced for each fiscal year from FY 2010 to FY 2014) Electricity consumption during product use is calculated as electricity usage for the anticipated usage time per product unit × Units shipped for the subject fiscal year. Electricity usage for the anticipated usage time per product unit is calculated as electricity consumed (kW) × Time used (h) / Days × Number of days used / Year × 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) × Electricity used at Fujitsu's recycling centers during the year × Emissions per unit of electricity (Source: Actual emission factor for each electricity utility based on ministerial ordinances on calculation and adjusted emission factor for each electricity utility based on reporting orders, announced for each fiscal year from FY 2010 to FY 2014)

Supplementary Data

Indicator	Unit	Calculation Method
Measured value of groundwater pollution	mg/L	The highest measurements 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.

Operating Activities and Environmental Load (Material Balance)

INPUT

Indicator			Unit	Calculation Method
Design Procurement Manufacturing Development	Raw Materials		ktons	Material inputs to our major products*1 shipped in the fiscal year (raw materials per unit for each product × the number of units shipped in the fiscal year)
	Chemical Substances	Volume of substances subject to VOC emissions restrictions	Tons	For 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 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	For 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), totals are provided for those substances handled in quantities exceeding 100 kg annually per business site, including overseas sites.
	Water usage		m^3	* For the calculation method, see "Water use" in the Environmental Action Plan (Stage VII).
	Energy consumption (calorie basis)		GJ	∑[(Electricity, fuel oil, gas, and district heating and cooling annual usage) × Thermal conversion factor for each type of energy*1] *1 Thermal conversion factor (Heating value unit): Based on sources including a table of standard heating values for specific energy sources published in February 2012 by the Agency for Natural Resources and Energy. Conversion factors of 9.83 GJ/MWh for electricity, and 46.1 GJ/1,000m^3 for town gas were used.
		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*1 shipped during the fiscal year (Amount of electricity used for time estimated per product unit × units shipped in the fiscal year)
			GJ	
Collection/Reuse/ Recycling	Resource recycling rate		%	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.
	Processed volume		Tons	

OUTPUT

Indicator			Unit	Calculation Method
Design Procurement Manufacturing Development	Raw Materials	CO_2 emissions	ktons 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 × 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	For 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 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	For 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 business site, including overseas sites.
	Atmospheric Release	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 VII).
		GHG emissions other than CO_2	Tons	* For the calculation method, see "Greenhouse gas emissions (GHG emissions other than CO_2) at business sites" in the Environmental Action Plan (Stage VII).
		NOx emissions	Tons	NOx concentration (ppm) × 10^{-6} × Dry gas emissions (m^3N/hr) × Operating time (hr/yr) × 46/22.4 × 10^{-3}
		SOx emissions	Tons	SOx concentration (ppm) × 10^{-6} × Dry gas emissions (m^3N/hr) × Operating time (hr/yr) × 64/22.4 × 10^{-3}
	Water Discharge	Wastewater discharges	m^3	Annual water discharges 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) × Water discharges (m^3/yr) × 10^{-6}
		COD emissions	Tons	COD concentration (mg/l) × Water discharges(m^3/yr) × 10^{-6}
	Waste	Amount of Waste Generated	Tons	* For the calculation method, see "Waste generated."
		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 re-use, 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		ktons CO_2	Emission intensity per electricity has changed since FY2014. 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).

List of Organizations Covered by the Report on Environmental Activities

▪ **Organizations Covered**
The coverage is of Fujitsu itself plus a total of 117 companies (including companies outside Japan) centering on consolidated subsidiaries that have built environmental management systems.
The table below shows the organizations for which individual performance data is gathered.

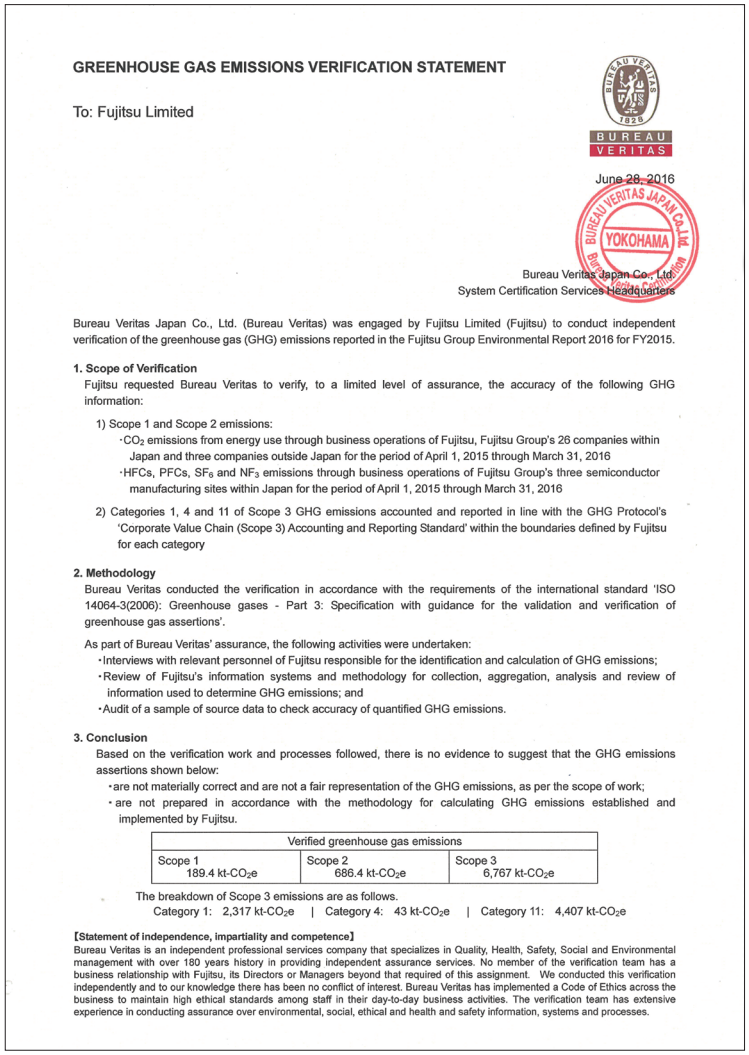
▪ **Regarding the Indicators:**
- Environmental burden: Organizations for which business site environmental burden data is calculated
- Scope 1, 2, 3: Organizations that are the subject of calculations used in the GHG Emissions Report based on GHG Protocol Standards (p. 58)
- Logistics: Organizations for which logistics and transport data is calculated
- Environmental Accounting: Organizations for which environmental accounting data is calculated
- EMS: Organizations with Environmental Management Systems (EMS)

No.	Company name	Environmental burden	Scope 1, 2, 3	Logistics	Environmental Accounting	EMS
1	Fujitsu Limited	✓	✓	✓	✓	✓
	Fujitsu Group companies in Japan (84 companies)					
1	Fujitsu Advanced Printing & Publishing Co., Ltd.		✓	✓		✓
2	FUJITSU HOME & OFFICE SERVICES LIMITED		✓			✓
3	Fujitsu University		✓			✓
4	Kawasaki Frontale Limited		✓			✓
5	Fujitsu Refre Limited		✓			✓
6	Fujitsu Travelance Ltd.		✓			✓
7	Fujitsu Human Resource Professionals Limited		✓			✓
8	Fujitsu Techno Research Limited		✓			✓
9	Fujitsu CIT Limited		✓			✓
10	Toyama Fujitsu Limited	✓	✓			✓
11	Fujitsu Facilities Limited		✓			✓
12	OKINAWA FUJITSU SYSTEMS ENGINEERING LIMITED		✓			✓
13	DIGITAL PROCESS LTD.		✓			✓
14	PFU LIMITED	✓	✓	✓	✓	✓
15	FUJITSU BANKING SOLUTIONS LIMITED		✓			✓
16	SHIGA FUJITSU SOFTWARE LIMITED		✓			✓
17	FUJITSU BROAD SOLUTION & CONSULTING Inc.		✓			✓
18	FUJITSU SOCIAL SCIENCE LABORATORY LIMITED		✓			✓
19	FUJITSU MISSION CRITICAL SYSTEMS LIMITED		✓			✓
20	FUJITSU YFC LIMITED		✓			✓
21	FUJITSU NIIGATA SYSTEMS LIMITED		✓			✓
22	FUJITSU HOKURIKU SYSTEMS LIMITED		✓			✓
23	FUJITSU KYUSHU SYSTEMS LIMITED		✓			✓
24	FUJITSU KAGOSHIMA INFORNET LIMITED.		✓			✓
25	FUJITSU FIP CORPORATION	✓	✓			✓
26	NIFTY Corporation		✓			✓
27	G-Search Limited		✓			✓
28	FUJITSU FSAS INC.		✓	✓		✓
29	FUJITSU COMMUNICATION SERVICES LIMITED		✓			✓
30	FUJITSU NETWORK SOLUTIONS LIMITED		✓			✓
31	Fujitsu Frontech Limited	✓	✓	✓	✓	✓
32	FUJITSU SYSTEM INTEGRATION LABORATORIES LIMITED		✓			✓
33	FUJITSU TOKKI SYSTEMS LIMITED		✓			✓
34	FUJITSU DEFENSE SYSTEMS ENGINEERING LIMITED		✓			✓
35	Fujitsu Applications.Ltd.		✓			✓
36	FUJITSU LEARNING MEDIA LIMITED		✓			✓
37	FUJITSU RESEARCH INSTITUTE		✓			✓
38	FUJITSU Marketing LIMITED		✓	✓		✓
39	FUJITSU FOM LIMITED		✓	✓		✓
40	FUJITSU CoWorCo LIMITED		✓	✓		✓
41	TWO-ONE LIMITED		✓			✓
42	FUJITSU I-NETWORK SYSTEMS LIMITED	✓	✓	✓	✓	✓
43	ECOLITY SERVICE LIMITED		✓		✓	✓
44	FUJITSU ADVANCED ENGINEERING LIMITED		✓			✓
45	Fujitsu Software Technologies Limited		✓			✓
46	FUJITSU MIDDLEWARE LIMITED		✓			✓
47	Fujitsu Kyushu Network Technologies Limited		✓			✓
48	FUJITSU TELECOM NETWORKS LIMITED	✓	✓	✓	✓	✓
49	FUJITSU WIRELESS SYSTEMS LIMITED	✓	✓	✓		✓
50	FUJITSU COMPUTER TECHNOLOGIES LIMITED		✓			✓
51	FUJITSU IT PRODUCTS LIMITED	✓	✓	✓	✓	✓
52	Fujitsu Isotec Limited	✓	✓	✓	✓	✓
53	FUJITSU PERIPHERALS LIMITED	✓	✓	✓	✓	✓
54	FUJITSU PERSONAL SYSTEM LIMITED		✓	✓		✓
55	Shimane Fujitsu Limited	✓	✓	✓	✓	✓
56	FUJITSU KASEI LIMIED	✓	✓	✓	✓	✓
57	Fujitsu Interconnect Technologies Limited	✓	✓	✓	✓	✓

No.	Company name	Environmental burden	Scope 1, 2, 3	Logistics	Environmental Accounting	EMS
58	FUJITSU QUALITY LABORATORY LIMITED		✓			✓
59	Fujitsu Optical Components Limited	✓	✓	✓	✓	✓
60	FUJITSU KANSAI-CHUBU NET-TECH LIMITED		✓			✓
61	Fujitsu Mission Critical Software LTD.		✓			✓
62	FDK CORPORATION	✓	✓	✓	✓	✓
63	FUJITSU COMPONENT LIMITED	✓	✓	✓	✓	✓
64	Transtron Inc.		✓	✓	✓	✓
65	FUJITSU ELECTRONICS INC.		✓	✓		✓
66	Fujitsu Semiconductor IT Systems Ltd.		✓			✓
67	FUJITSU FACILITIES ENGINEERING LIMITED		✓			✓
68	SHINKO ELECTRIC INDUSTRIES CO., LTD.	✓	✓	✓	✓	✓
69	FUJITSU TEN LIMITED	✓	✓	✓	✓	✓
70	FUJITSU TEN MANUFACTURING LIMITED	✓	✓			✓
71	FUJITSU LABORATORIES LTD	✓	✓		✓	✓
72	FUJITSU SEMICONDUCTOR LIMITED	✓	✓	✓		✓
73	Fujitsu Design Limited		✓			✓
74	Fujitsu Advanced Technologies Limited		✓			✓
75	FUJITSU MOBILE COMMUNICATIONS LIMITED		✓			✓
76	Fujitsu Systems West Limited		✓			✓
77	Fujitsu Systems East Limited		✓			✓
78	FUJITSU CAPITAL LIMITED		✓			✓
79	MIE FUJITSU SEMICONDUCTOR LIMITED	✓	✓		✓	✓
80	AIZU FUJITSU SEMICONDUCTOR LIMITED	✓	✓			✓
81	AIZU FUJITSU SEMICONDUCTOR WAFER SOLUTION LIMITED	✓	✓		✓	✓
82	AIZU FUJITSU SEMICONDUCTOR MANUFACTURING LIMITED	✓	✓		✓	✓
83	AIZU FUJITSU SEMICONDUCTOR PROBE LIMITED	✓	✓			✓
84	Fujitsu IT Management Partner Co., Ltd.					✓
85	Fujitsu IS Service Limited					✓
Fujitsu Group companies worldwide (31 companies)						
1	FUJITSU COMPUTER PRODUCTS OF VIETNAM INC.	✓	✓		✓	✓
2	Jiangsu Fujitsu Telecommunications Technology Co., Ltd.					✓
3	Fuitsu Electronics Pacific Asia Limited					✓
4	Fuitsu Electronics (Shanghai) Co., Ltd.					✓
5	FUJITSU HONG KONG LIMITED					✓
6	FUJITSU DO BRASIL LIMITADA					✓
7	FUJITSU ASIA PTE. LTD					✓
8	FUJITSU NETWORK COMMUNICATIONS INC.	✓	✓	✓	✓	✓
9	Fujitsu America, Inc.		✓	✓		✓
10	Fujitsu Systems Business (Thailand) Ltd.					✓
11	Fujitsu PC Asia Pacific Pte Ltd.		✓	✓		✓
12	FUJITSU AUSTRALIA LTD.		✓	✓		✓
13	Fujitsu Technology Solutions	✓	✓	✓	✓	✓
14	Fuitsu Electronics Europe GmbH					✓
15	Nanjing Fujitsu Nanda Software Technology Co., Ltd.					✓
16	FUJITSU SERVICES HOLDINGS PLC		✓	✓		✓
17	FUJITSU KOREA LTD.					✓
18	FUJITSU TAIWAN LIMITED					✓
19	Fujitsu Telecomunication Asia Sdn. Bhd.					✓
20	FUJITSU (CHINA) HOLDINGS CO., LTD.					✓
21	Fuitsu Technology and Business of America, Inc.					✓
22	FUJITSU (XI'AN) SYSTEM ENGINEERING CO., LTD.					✓
23	Beijing Fujitsu System Engineering Co., LTD.					✓
24	GLOVIA International, Inc.					✓
25	FUJITSU AUSTRALIA SOFTWARE TECHNOLOGY PTY. LTD.					✓
26	FUJITSU Enabling Software Technology GmbH					✓
27	Fuitsu Electronics America, Inc					✓
28	Fuitsu Electronics Korea Ltd.					✓
29	Fujitsu Research and Development Center Co., LTD.					✓
30	Fujitsu Computer Products of America		✓	✓		✓
31	Fujitsu Frontech North America Inc.		✓	✓		✓

Third Party Verification

In order to ensure the reliability of the content of the Fujitsu Group Environmental Report 2016 and the Fujitsu Group CSR Report 2016, we ask a third party, Bureau Veritas Japan, to examine and post a review of the reports.



GREENHOUSE GAS EMISSIONS VERIFICATION STATEMENT

To: Fujitsu Limited

June 28, 2016

Bureau Veritas Japan Co., Ltd.
System Certification Services Headquarters

Bureau Veritas Japan Co., Ltd. (Bureau Veritas) was engaged by Fujitsu Limited (Fujitsu) to conduct independent verification of the greenhouse gas (GHG) emissions reported in the Fujitsu Group Environmental Report 2016 for FY2015.

1. Scope of Verification

Fujitsu requested Bureau Veritas to verify, to a limited level of assurance, the accuracy of the following GHG information:

1) Scope 1 and Scope 2 emissions:
- CO_2 emissions from energy use through business operations of Fujitsu, Fujitsu Group's 26 companies within Japan and three companies outside Japan for the period of April 1, 2015 through March 31, 2016
- HFCs, PFCs, SF_6 and NF_3 emissions through business operations of Fujitsu Group's three semiconductor manufacturing sites within Japan for the period of April 1, 2015 through March 31, 2016

2) Categories 1, 4 and 11 of Scope 3 GHG emissions accounted and reported in line with the GHG Protocol's 'Corporate Value Chain (Scope 3) Accounting and Reporting Standard' within the boundaries defined by Fujitsu for each category

2. Methodology

Bureau Veritas conducted the verification in accordance with the requirements of the international standard 'ISO 14064-3(2006): Greenhouse gases - Part 3: Specification with guidance for the validation and verification of greenhouse gas assertions'.

As part of Bureau Veritas' assurance, the following activities were undertaken:
- Interviews with relevant personnel of Fujitsu responsible for the identification and calculation of GHG emissions;
- Review of Fujitsu's information systems and methodology for collection, aggregation, analysis and review of information used to determine GHG emissions; and
- Audit of a sample of source data to check accuracy of quantified GHG emissions.

3. Conclusion

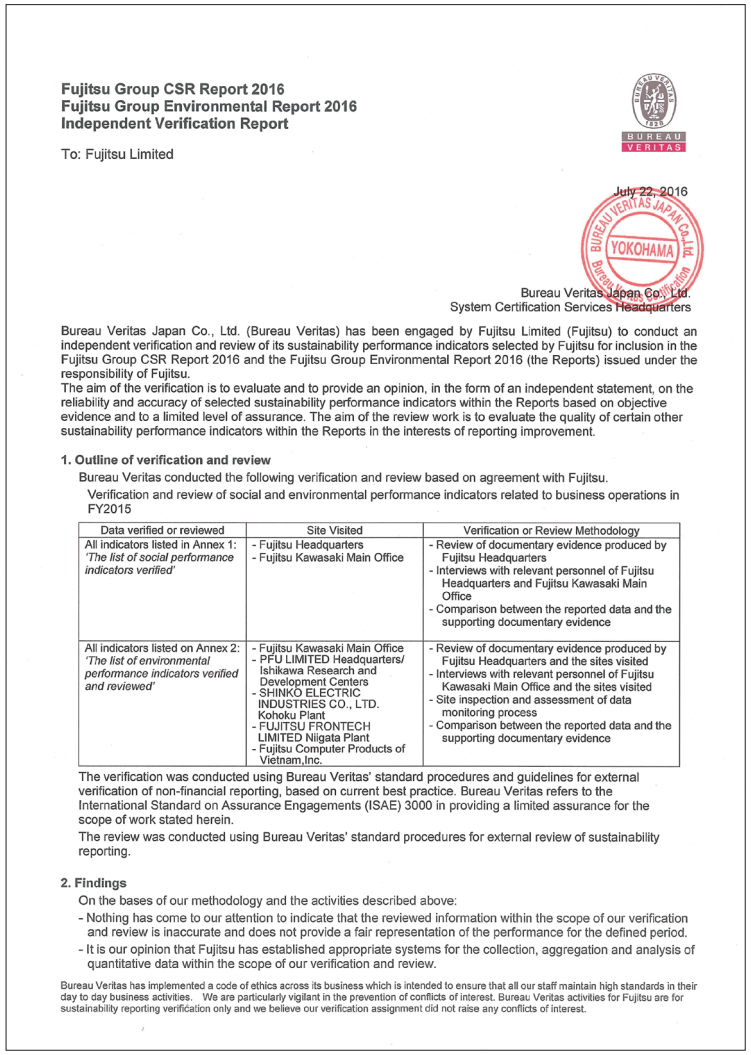
Based on the verification work and processes followed, there is no evidence to suggest that the GHG emissions assertions shown below:
- are not materially correct and are not a fair representation of the GHG emissions, as per the scope of work;
- are not prepared in accordance with the methodology for calculating GHG emissions established and implemented by Fujitsu.

Verified greenhouse gas emissions		
Scope 1 189.4 kt-CO_2e	Scope 2 686.4 kt-CO_2e	Scope 3 6,767 kt-CO_2e

The breakdown of Scope 3 emissions are as follows.
Category 1: 2,317 kt-CO_2e | Category 4: 43 kt-CO_2e | Category 11: 4,407 kt-CO_2e

【Statement of independence, impartiality and competence】

Bureau Veritas is an independent professional services company that specializes in Quality, Health, Safety, Social and Environmental management with over 180 years history in providing independent assurance services. No member of the verification team has a business relationship with Fujitsu, its Directors or Managers beyond that required of this assignment. We conducted this verification independently and to our knowledge there has been no conflict of interest. Bureau Veritas has implemented a Code of Ethics across the business to maintain high ethical standards among staff in their day-to-day business activities. The verification team has extensive experience in conducting assurance over environmental, social, ethical and health and safety information, systems and processes.



Fujitsu Group CSR Report 2016
Fujitsu Group Environmental Report 2016
Independent Verification Report

To: Fujitsu Limited

July 22, 2016

Bureau Veritas Japan Co., Ltd.
System Certification Services Headquarters

Bureau Veritas Japan Co., Ltd. (Bureau Veritas) has been engaged by Fujitsu Limited (Fujitsu) to conduct an independent verification and review of its sustainability performance indicators selected by Fujitsu for inclusion in the Fujitsu Group CSR Report 2016 and the Fujitsu Group Environmental Report 2016 (the Reports) issued under the responsibility of Fujitsu.
The aim of the verification is to evaluate and to provide an opinion, in the form of an independent statement, on the reliability and accuracy of selected sustainability performance indicators within the Reports based on objective evidence and to a limited level of assurance. The aim of the review work is to evaluate the quality of certain other sustainability performance indicators within the Reports in the interests of reporting improvement.

1. Outline of verification and review

Bureau Veritas conducted the following verification and review based on agreement with Fujitsu.
Verification and review of social and environmental performance indicators related to business operations in FY2015

Data verified or reviewed	Site Visited	Verification or Review Methodology
All indicators listed in Annex 1: *'The list of social performance indicators verified'*	- Fujitsu Headquarters - Fujitsu Kawasaki Main Office	- Review of documentary evidence produced by Fujitsu Headquarters - Interviews with relevant personnel of Fujitsu Headquarters and Fujitsu Kawasaki Main Office - Comparison between the reported data and the supporting documentary evidence
All indicators listed on Annex 2: *'The list of environmental performance indicators verified and reviewed'*	- Fujitsu Kawasaki Main Office - PFU LIMITED Headquarters/ Ishikawa Research and Development Centers - SHINKO ELECTRIC INDUSTRIES CO., LTD. Kohoku Plant - FUJITSU FRONTECH LIMITED Niigata Plant - Fujitsu Computer Products of Vietnam,Inc.	- Review of documentary evidence produced by Fujitsu Headquarters and the sites visited - Interviews with relevant personnel of Fujitsu Kawasaki Main Office and the sites visited - Site inspection and assessment of data monitoring process - Comparison between the reported data and the supporting documentary evidence

The verification was conducted using Bureau Veritas' standard procedures and guidelines for external verification of non-financial reporting, based on current best practice. Bureau Veritas refers to the International Standard on Assurance Engagements (ISAE) 3000 in providing a limited assurance for the scope of work stated herein.
The review was conducted using Bureau Veritas' standard procedures for external review of sustainability reporting.

2. Findings

On the bases of our methodology and the activities described above:
- Nothing has come to our attention to indicate that the reviewed information within the scope of our verification and review is inaccurate and does not provide a fair representation of the performance for the defined period.
- It is our opinion that Fujitsu has established appropriate systems for the collection, aggregation and analysis of quantitative data within the scope of our verification and review.

Bureau Veritas has implemented a code of ethics across its business which is intended to ensure that all our staff maintain high standards in their day to day business activities. We are particularly vigilant in the prevention of conflicts of interest. Bureau Veritas activities for Fujitsu are for sustainability reporting verification only and we believe our verification assignment did not raise any conflicts of interest.

Annex 1

The list of social performance indicators verified

Performance indicators verified	Page
Number of attendees to Female Leadership Development Program	14
Rate of woman managers	14・55・78
Employment rate of people with disabilities	15・57・78
Number of employees using the care leave support system	15・65・79
Foster global business leaders Number of attendees to Next-generation business leaders development programs	15
The number of periodic dialogue with residents in regions with major business sites	16
The number of internal database records of social contribution activities	17
CSR activities with use of ISO26000 Number of group companies which performed survey based on ISO26000	21
Number of Directors	30・78・110
Frequency of industrial accidents	70・79
Numbers and average ages of employees	78・110・112
Number of employees by age group	78
Hiring of recent college graduates	79
Employees by region	78・111
Average years of service	79
Promoting socially responsible procurement (the number of written surveys to suppliers)	93

Annex 2

The list of environmental performance indicators verified and reviewed

Performance indicators verified		Page
Rate of newly developed products that are top-level energy efficient		25
Improvement rate of resource efficiency in newly developed products		27
Amount of greenhouse gas emissions in our business facilities		34
Improving rate of energy intensity in our business facilities		
CO_2 emission from transport (Fujitsu and group companies in Japan)		38
Water usage		41
PRTR Substance and VOC Emissions		43
Amount of waste generated		44
Effective utilization ratio		
Resource reuse rate of business ICT equipment		46
INPUT (design, procurement, manufacturing, development)	Water	57
	Energy	
INPUT (recycling)	Resource recycling rate	
OUTPUT (design, procurement, manufacturing, development)	Chemical substances	
	Atmospheric release Greenhouse gases total	
	Atmospheric release CO_2	
	Atmospheric release Greenhouse gases other than CO_2	
	Volume of waste generated	
	Volume of thermal and material recycling	
	Volume of waste disposal	
OUTPUT (distribution) Atmospheric release CO_2 (Fujitsu and group companies in Japan)		
Scope3 (upstream) Transportation and distribution (Fujitsu and group companies in Japan)		58
Scope1 (reporting company) Direct emissions		
Scope2 (reporting company) Indirect emissions from energy sources		
Scope3 (upstream) Purchased goods and services		
Scope3 (downstream) Use of sold products		
Energy usage in Scope1 and Scope2		59

Performance indicators reviewed		Page
Amount of contribution to reducing emissions of greenhouse gases (GHG) through the provision of ICT		22
Percentage of reduced CO_2 emission per sales from transport		38
CO_2 emission from transport (group companies in worldwide)		
Environmental accounting		56
INPUT (design, procurement, manufacturing, development)	Chemical substances	57
INPUT (distribution) Energy		
OUTPUT (distribution) Atmospheric release CO_2 (group companies in worldwide)		
Scope3 (upstream) Transportation and distribution (group companies in worldwide)		58

GRI Guidelines Reference Table (G4)

General Standard Disclosures

Indicator		Relevant page / topic	
Strategy and Analysis			
G4-1	Statement from the most senior decision-maker	4	Top Message
G4-2	Key impacts, risks, and opportunities	5 51	Interview Initiatives to Minimize Environmental Risk
Organizational Profile			
G4-3	Name of the organization	59	Fujitsu Group Profile
G4-4	Primary brands, products, and services	59	Fujitsu Group Profile
G4-5	Location of the organization's headquarters	59	Fujitsu Group Profile
G4-6	Number, and names, of countries where the organization operates	63	List of Organizations Covered by the Report on Environmental Activities
G4-7	Nature of ownership and legal form		—
G4-8	Markets served		—
G4-9	Scale of the organization: employees, operations, net sales	59	Fujitsu Group Profile
G4-10	Number of employees by employment contract and gender		—
G4-11	Percentage of employees covered by collective bargaining agreements		—
G4-12	Organization's supply chain		—
G4-13	Significant organizational changes during the reporting period	2	Significant Changes in Coverage
Commitments to External Initiatives			
G4-14	The precautionary approach or principle addressed by the organization	51	Initiatives to Minimize Environmental Risk
G4-15	Initiatives which the organization endorses	54	Tie-ups with External Organizations in order to Spread Green ICT and a Sustainable Society
G4-16	Membership in external associations	50 54	Acquiring Information on Chemical Substances Contained in Products Tie-ups with External Organizations in order to Spread Green ICT and a Sustainable Society
Identified Material Aspects and Boundaries			
G4-17	List of entities included in the organization		—
G4-18	Process for defining the report content and the aspect boundaries	2	Editorial Policy
G4-19	List of specified material aspects	5 21 33	Interview Contribution to Society Reducing Our Environmental Burden
G4-20	Aspect boundary for each material aspect (within the organization)	57 60 63	Material Balance Environmental Performance Data Calculation Standards List of Organizations Covered by the Report on Environmental Activities
G4-21	Aspect boundary for each material aspect (outside the organization)		—
G4-22	Reasons for any restatements of information provided in previous reports	21 33	Contribution to Society Reducing Our Environmental Burden
G4-23	Changes to scope and aspect boundaries	2	Significant Changes in Coverage
Stakeholder Engagement			
G4-24	List of stakeholder groups engaged by the organization	54	Tie-ups with External Organizations in order to Spread Green ICT and a Sustainable Society
G4-25	Basis for identification and selection of stakeholders	53	Environmental Dialogues with Experts
G4-26	Engagement frequency and numerical totals	31 52 53	Collaborating with Communities and Taking Action as a Good Corporate Citizen In-House Environmental Educational and Enlightenment Activities Environmental Dialogues with Experts
G4-27	Key topics and concerns raised through stakeholder engagement	53	Environmental Dialogues with Experts
Report Profile			
G4-28	Reporting period	2	Reporting Period
G4-29	Date of most recent previous report	2	Published
G4-30	Reporting cycle	2	Published
G4-31	Contact point for questions regarding the report	2	Editorial Policy
GRI Content Index			
G4-32	The 'in accordance' option the organization has chosen		—
Assurance			
G4-33	Policy and practice regarding external assurance for the report	65	Third Party Inspection
Governance			
*G4-51 to G4-55 do not apply.			
G4-34	Governance structure	48	Environmental Management
G4-35	Process for delegating authority for economic, environmental and social topics	48	Environmental Management
G4-36	Appointees with responsibility for reporting economic, environmental and social topics	48	Environmental Management

Indicator		Relevant page / topic	
G4-37	Processes for consultation between stakeholders and the highest governance body	48	Environmental Management
G4-38	Composition of the highest governance body	48	Environmental Management
G4-39	Whether the Chair of the highest governance body is also an executive officer	48	Environmental Management
G4-40	Nomination and selection processes		—
G4-41	Processes for avoiding conflicts of interest		—
G4-42	Roles in the development of purpose, policies, and strategies	48	Environmental Management
G4-43	Enhancing knowledge of economic, environmental and social topics		—
G4-44	Evaluation with respect to governance of economic, environmental and social topics	48	Environmental Management
G4-45	Identification of economic, environmental and social impacts, risks, and opportunities	48	Environmental Management
G4-46	Roles in risk management processes for economic, environmental and social topics	48	Environmental Management
G4-47	Review of economic, environmental and social impacts, risks, and opportunities	48	Environmental Management
G4-48	Highest committee or position that approves the report		—
G4-49	Process for communicating critical concerns	48	Environmental Management
G4-50	Nature and number of critical concerns that were communicated		—
Ethics and Integrity			
*G4-56 to G4-58 do not apply.			

Specific Standard Disclosures: Economic

*G4-EC3 to G4-EC6, G4-EC9 do not apply.

Indicator		Relevant page / topic	
Aspect: Economic Performance			
G4-EC1	Direct economic value generated and distributed	31	Collaborating with Communities and Taking Action as a Good Corporate Citizen
G4-EC2	Financial implications and other risks and opportunities for the organization's activities due to climate change	51 56	Initiatives to Minimize Environmental Risk Environmental Accounting
Aspect: Indirect Economic Impacts			
G4-EC7	Development and impact of infrastructure investments and services supported	31	Collaborating with Communities and Taking Action as a Good Corporate Citizen
G4-EC8	Significant indirect economic impacts, including the extent of impacts	5 51 56	Interview Initiatives to Minimize Environmental Risk Environmental Accounting

Specific Standard Disclosures: Environmental

Indicator		Relevant page / topic	
Aspect: Materials			
EN1	Materials used by weight or volume	57	Material Balance
EN2	Percentage of materials used that are recycled input materials		—
Aspect: Energy			
EN3	Energy consumption within the organization	57	Material Balance
EN4	Energy consumption outside of the organization	57	Material Balance
EN5	Energy intensity	59	Energy Usage(Scope 1 and Scope 2)
EN6	Reduction of energy consumption	34 36 38 39	Reducing Greenhouse Gases (GHG) Emissions and Boosting Energy Intensity at Our Business Sites Promoting Environmentally Conscious Data Centers Reduce CO_2 Emissions from Logistics and Transportation Promoting CO_2 Emission Reductions with Our Business Partners
EN7	Reductions in energy requirements of products and services	25	Development of Top-Level Energy Efficient Products
Aspect: Water			
EN8	Total water withdrawal by source		—
EN9	Water sources significantly affected by withdrawal of water		—
EN10	Percentage and total volume of water recycled and reused	41	Efficient Use of Water Resources
Aspect: Biodiversity			
EN11	Operational sites owned, leased, managed in, or adjacent to, protected areas and areas of high biodiversity value outside protected areas		—
EN12	Description of significant impacts of activities, products, and services on biodiversity in protected areas and areas of high biodiversity value outside protected areas	31	Collaborating with Communities and Taking Action as a Good Corporate Citizen

Indicator		Relevant page / topic	
EN13	Habitats protected or restored	31	Collaborating with Communities and Taking Action as a Good Corporate Citizen
EN14	Total number of iucn red list species and national conservation list species with habitats in areas affected by operations, by level of extinction risk		—
Aspect: Emissions			
EN15	Direct greenhouse gas (GHG) emissions (scope 1)	58	GHG Emissions Report based on GHG Protocol Standards
EN16	Energy indirect greenhouse gas (GHG) emissions (scope 2)	58	GHG Emissions Report based on GHG Protocol Standards
EN17	Other indirect greenhouse gas (GHG) emissions (scope 3)	58	GHG Emissions Report based on GHG Protocol Standards
EN18	Greenhouse gas (GHG) emissions intensity	34	Reducing Greenhouse Gases (GHG) Emissions and Boosting Energy Intensity at Our Business Sites
EN19	Reduction of greenhouse gas (GHG) emissions	34	Reducing Greenhouse Gases (GHG) Emissions and Boosting Energy Intensity at Our Business Sites
EN20	Emissions of ozone-depleting substances (ODS)		—
EN21	NOx, SOx, and other significant air emissions	57	Material Balance
Aspect: Effluents and Waste			
EN22	Total water discharge by quality and destination	57	Material Balance
EN23	Total weight of waste by type and disposal method	44 57	Limiting Amounts of Waste Generated Material Balance
EN24	Total number and volume of significant spills		—
EN25	Weight of transported, imported, exported, or treated waste deemed hazardous under the terms of the Basel Convention Annex I, II, III, and VIII, and percentage of transported waste shipped internationally		—
EN26	Identity, size, protected status, and biodiversity value of water bodies and related habitats significantly affected by the organization's discharges of water and runoff		—
Aspect: Products and Services			
EN27	Extent of impact mitigation of environmental impacts of products and services	25 27	Development of Top-Level Energy Efficient Products Improving the resource efficiency of products
EN28	Percentage of products sold and their packaging materials that are reclaimed by category	46 57	Product Recycling Material Balance

Indicator		Relevant page / topic	
Aspect: Compliance			
EN29	Monetary value of significant fines and total number of non-monetary sanctions for non-compliance with environmental laws and regulations	49	Status of Environmental Compliance
Aspect: Transport			
EN30	Significant environmental impacts of transporting products and other goods and materials for the organization's operations, and transporting members of the workforce	38 57	Reduce CO_2 Emissions from Logistics and Transportation Material Balance
Aspect: Overall			
EN31	Total environmental protection expenditures and investments by type	56	Environmental Accounting / Environmental Liabilities
Aspect: Supplier Environmental Assessment			
EN32	Percentage of new suppliers that were screened using environmental criteria		—
EN33	Significant actual and potential negative environmental impacts in the supply chain and actions taken		—
Aspect: Environmental Grievance Mechanisms			
EN34	Number of grievances about environmental impacts filed, addressed, and resolved through formal grievance mechanisms	59	Response to Environmental Complaints (FY 2015)

Specific Standard Disclosures: Society

*Labor Practices and Decent Work, Human Rights ,Product Responsibility do not apply.

Indicator		Relevant page / topic	
Society			
*G4-SO3 to G4-SO11 do not apply.			
G4-SO1	Percentage of operations with implemented local community engagement, impact assessments, and development programs	31	Collaborating with Communities and Taking Action as a Good Corporate Citizen
G4-SO2	Operations with significant actual and potential negative impacts on local communities	51 59	Preventing Pollution of Soil and Groundwater Business Sites Where Soil or Groundwater Contamination Has Been Found