

Fujitsu Group Sustainability Report 2013

Detailed version

FUJITSU

The Power of ICT for sustainability and beyond



shaping tomorrow with you

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Fujitsu Limited President

Masami Yamamoto

Toward a Human Centric Intelligent Society

Fujitsu will contribute to the development of a sustainable earth and society, and to the construction of a safe and secure digital society, as the social responsibilities of an ICT company.

Toward the Realization of a Sustainable Society

ICT has connected people across the globe and given rise to countless ideas and opportunities. Globalization, which has accelerated with the innovative application of ICT, has been instrumental in the global economy's threefold expansion over the past 20 years. Problems, however, remain. Climate change and natural disasters are growing in severity. Population growth is giving rise to concerns about possible shortages of food, water, and energy. And there are any number of other linked social problems that have come to light. These threats tell us that we, rather than pursuing profits at the expense of others, should work together toward sustainable, inclusive development.

Enhancing the Power of ICT

As a global ICT enterprise, the Fujitsu Group actively thinks about its social responsibility to use the power of ICT to contribute to the realization of a sustainable earth and society, and to maintain and strengthen the safety and security of digital society.

Through the expansion of the environments and circumstances in which it is used, and growth in its capabilities, ICT, now, more than a tool for making business more efficient and supporting social infrastructure, stands at the threshold of an era in which it will have enormous power to produce intelligence from massive volumes of data, and drive both change to a better society and improvements in human capabilities. The Fujitsu Group has put forth a medium-term vision of a "Human Centric Intelligent Society" in which the potential of everyone will be maximized through ICT, and society will develop along a sustainable path. Working together with others, we will use the power of ICT to create social innovation that will give rise to solutions in the fields of energy, transportation, food, health, the environment, and education.

The proliferation of ICT has led to the melding of daily life and digital society, and given rise to incalculable opportunities. At the same time, however, the rapid adoption of ICT has presented us with new issues.

Swiftly responding to the constantly rising number of cross-border cyber attacks, and the need to protect privacy, is the responsibility of all global ICT companies. The Fujitsu Group, working from a foundation of technologies it has developed through the operation of its own systems, is collaborating with various entities to address these problems.

The use and application of ICT, however, entails increases in the consumption of electricity and other forms of environmental burden, and these cannot be ignored. The Fujitsu Group, therefore, has formulated the Fujitsu Group Environmental Action Plan (Stage VII) not just as a matter of its own environmental consciousness but also to cooperate with customers and society to use ICT to reduce greenhouse gases for society as a whole and advance environmentally conscious management in other ways, as well.

Toward the Joint Creation of New Innovations

The Fujitsu Group, based on its brand promise of "shaping tomorrow with you," is committed to the practice of management that emphasizes the joint creation of value with stakeholders. Fujitsu will continue to support the UN Global Compact's 10 principles in the areas of human rights, labour, the environment, and anti-corruption, and, from FY 2012, has already embarked on the strengthening of its CSR management from perspectives like using the ISO26000 framework to confirm the status of Group company initiatives.

The Fujitsu Group, ever cognizant of the expectations and demands of stakeholders, will work to help realize a sustainable society and pass on to future generations a thriving global environment, as it works with others to create new innovations.

Introduction

ISSUES of Sustainable Development

Issues Humanity Must Overcome on an Increasingly Crowded Earth and in a Rapidly Expanding Cyber Society





Global Environmental Challenges

At around 7 billion, the global population imposes on the Earth an environmental burden that is 1.5 times what is thought to be sustainable. It is expected that this figure will have risen to 2.0 when the global population hits 8.4 billion in 2030. The capacity of our irreplaceable planet is not unlimited.

The Fujitsu Group is committed to using ICT*1 to help solve problems like the need to reduce greenhouse gas emissions for all of society, and protect natural capital.



Food and Energy Demand

Throughout the world, one out of eight people suffers from malnutrition, and one out of nine, from water stress. By 2030, food demand will have risen by 50% (compared to 2008), even as water shortages worsen and production of biofuels rises.

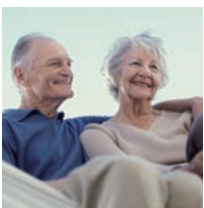
The Fujitsu Group is moving forward with the application of innovative ICT in fields like supply/demand management and agriculture, which have not seen the intense application of ICT to date.



The Social Impacts of Urbanization

Across the world, 28 cities have populations of 10 million or more and around 500 have populations of 1 million or more. With the expectation that 60% of the global population will live in cities by 2030, traffic congestion, atmospheric pollution, energy management, and other problems will only worsen.

The Fujitsu Group, by using ICT to analyze massive amounts of data, will help to solve these linked problems.



Global Population Aging

People 60 or older comprise 30% of the population in Japan, and average 20% in advanced countries and 9% in developing countries. By 2030, figures of 37%, 29%, and 14%, respectively, are expected. Swiftly addressing medical and elderly care, social security, and other problems, therefore, will be critical.

The Fujitsu Group, leveraging know-how developed in Japan, will rise to the challenge of solving these problems on a global basis.



The Digital Divide*2

The number of Internet users, now at around 2.4 billion, is seen as rising to 6.6 billion by 2030. While many people are benefitting from ICT, there are concerns about the growing disadvantages to those who cannot, due to hurdles like age, handicaps, and economic circumstances.

The Fujitsu Group, in working to create a society where ICT is available for everyone, is moving forward with the construction of ICT platforms and development of access devices.



Cyber Attacks and Cyber Crime

Cyber attacks on key ICT infrastructure are a major threat. As the use of cloud-based services and smart phones continues to rise, cyber crime, which now affects 500 million people and causes over 100 billion dollars in damages annually, will only grow.

The Fujitsu Group, in its aim to help create an ICT society that is safe and secure, will continue to strengthen its cyber security measures.

We are striving to transform society through the Three Powers of ICT

Please refer to pages 15 and beyond for case examples.

*1 ICT: Information and Communication Technology

*2 Digital divide: The gap between people who have ready access to digital information resources and those who do not.

The Power of ICT for sustainability and beyond

Using the Power of ICT to Solve Sustainability Issues and
Creating a Better Society for the Future

Human Centric Intelligent Society

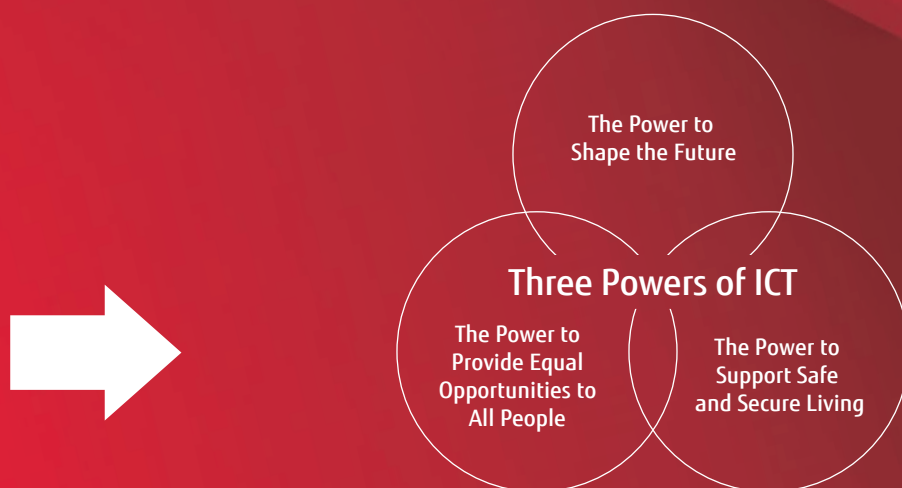
Imagine a world where people are free to achieve their full potential and instinctively feel secure and in control. A world where knowledge is continually harnessed to drive new value and support sustainable growth.

An Era in which All Manner of Objects and Social Infrastructure are Connected by Networks.

But with instant access to knowledge enabled through smart devices and the cloud, computing is now progressing into a new, human-centric era, where technology connects people, rather than the other way around.

The Fujitsu Group will transform society by producing new knowledge from the real-time analysis of the enormous volumes of data obtained in digital worlds.

“The Power of ICT” will support the activities and actions of people, striving for solving various social issues.



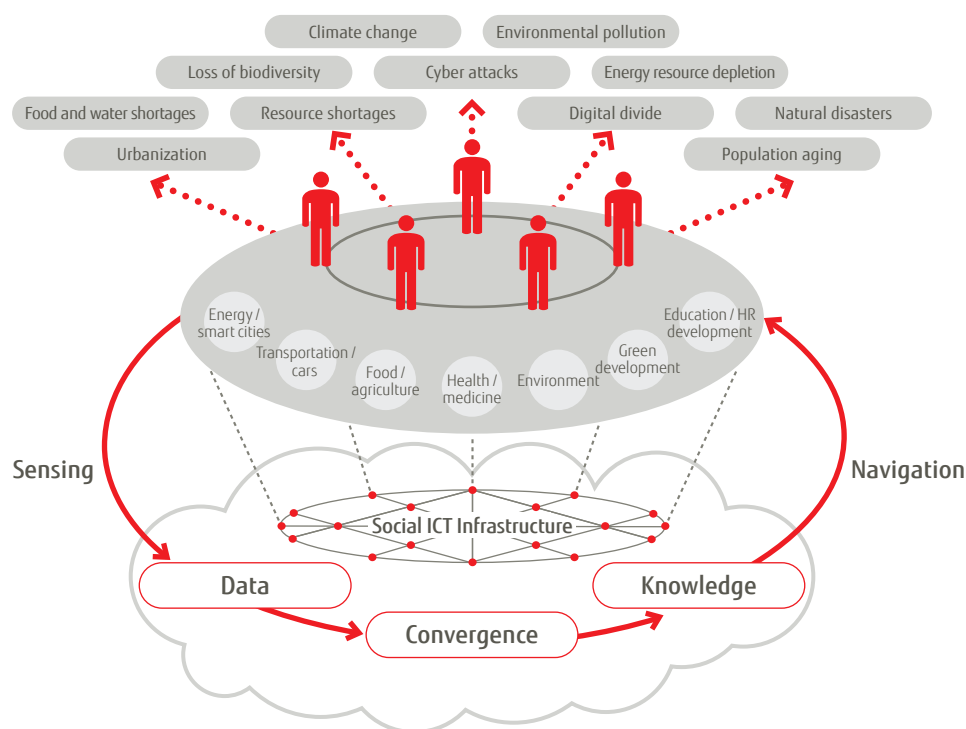


The Power to Shape the Future

Solving difficult global challenges and social issues through computing

- Demonstrate world-class technology leadership to step as far as possible into the future
- Expand the provision of solutions designed to address priorities (food, healthcare, education, etc.)
- Achieve our environmental vision – a low-carbon, prosperous society

Framework for Opening a Path to the Future



Interpreting the Activities of People and Society As Data, Solving Issues, and Creating New Intelligence

Data from households, workplaces, and various other places in society; data collected over networks from smart devices and sensors. Data portrays the activities and conditions of people and society in real time. By analyzing these enormous volumes of data with powerful computing resources, new knowledge can be created to support decision-making and enable the solving of social issues. We want to use the

power of ICT to get even one step closer to the future – we want to step up to the challenge of solving the world's most vexing problems through innovation. The Fujitsu Group is committed to helping solve environmental, energy, transportation, food, health, medical, and various other social issues by realizing a human centric intelligent society.

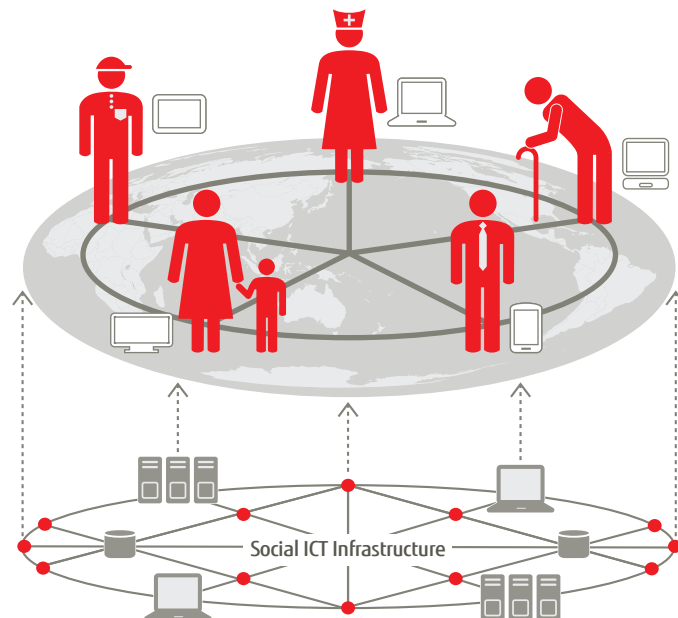


The Power to Provide Equal Opportunities to All People

Develop user-friendly terminals and interfaces, along with frameworks for promoting ICT implementation in developing countries

- Develop terminals and devices targeting rapidly increasing Internet users
- Execute businesses that provide opportunities on a global basis
- Conduct field surveys in developing countries and develop partnerships

Creation of Environments where the Advantages of ICT Can Be Enjoyed



**Toward a Society Where All of the World's People Can Easily Use and Apply ICT
Toward a Society Where Bonds among People Are Deepened,
and Wisdom and Expertise Are Shared**

With the spread of the Internet, it is now possible for anyone to easily obtain new information and knowledge. Smart devices provide us with various kinds of information while we shop, work, and go about other aspects of our daily lives. On the other hand, seniors for whom it is difficult to take full advantage of ICT, and people living in developing countries with inadequate infrastructure, are suffering from opportunities lost because of an information gap. We want to

use the power of ICT to help connect people and bring opportunity to the world's 7 billion people. The Fujitsu Group is working to create a framework for promoting the spread of ICT, for example, by developing interfaces that are easy to understand and use, and installing telecommunications infrastructure. We see this as working toward the realization of a society where as many people as possible can use ICT to pursue their own potential.

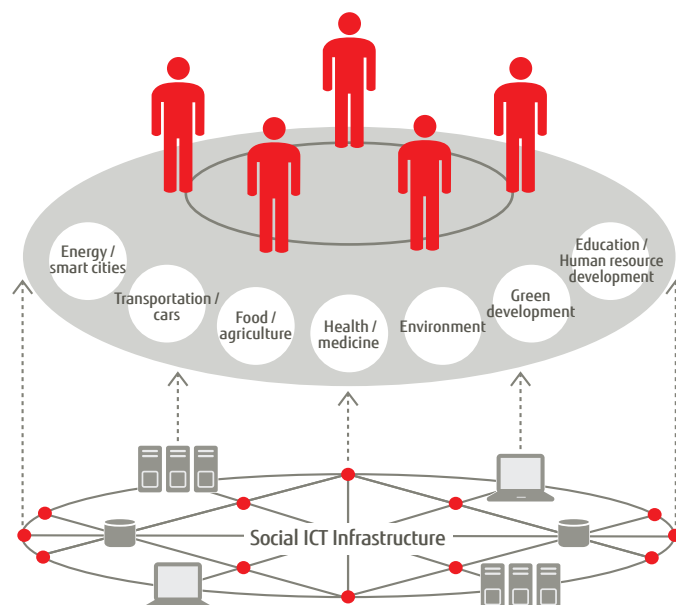


The Power to Support Safe and Secure Living

Ensure stable operation of social ICT infrastructure and cyber security

- Help to build a value-creation platform, eyeing an era when virtually everything is connected to the Internet
- Achieve stable operation of world-class ICT systems
- Develop and strengthen cyber security solutions

Social Infrastructure Supported by ICT



Social ICT Infrastructure that is Highly Reliable and Robust against Accidents, Disasters, and Cyber Attacks. We Want ICT to be a Power that Protects Peoples' Daily Lives, Industry, Society, and the World

ICT covers every aspect of society and supports our daily lives in areas like energy, transportation, finance, and medicine. ICT systems, however, have gradually become more and more complex, and there have been occasional instances in which accidents, disasters, unanticipated trouble, or other problems have resulted in significant impacts on society. The Internet, too, while greatly improving convenience for society, has shown its dark side

in the form of rising cyber crime, cyber attacks on key infrastructure, and other threats to international society. We want to use the power of ICT to promote safety and security in daily life by completely insulating social infrastructure from all threats. The Fujitsu Group will continue to use cloud-based security monitoring, biometric authentication devices, and other cutting-age technology to protect people's daily lives, industry, and society.

Our Approach to CSR

Responding by putting the Fujitsu Way, our corporate philosophy, into practice

Since its establishment in 1935, Fujitsu has contributed to the development of public infrastructure through innovative information and communications technologies. The ideas and spirit of successive leaders who paved the way for the Fujitsu Group's success are condensed and codified in the Fujitsu Way, which forms the core of our management practices.

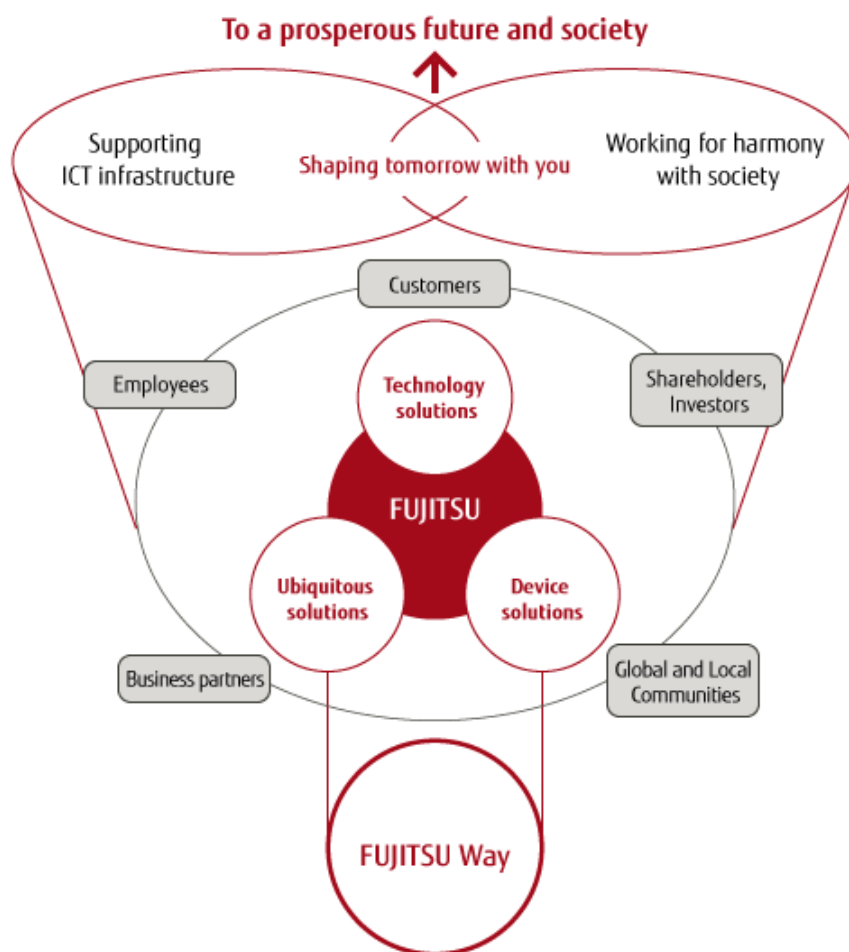
For the Fujitsu Group, Corporate Social Responsibility (CSR) means putting the Fujitsu Way into practice to address a variety of social issues and contribute to a sustainable, networked society. This requires management to focus not only on financial results, but also on operational excellence through sound corporate governance, and the integrity of the ethical, social, and environmental aspects of business.

With this in mind, the Group promotes a global management style based on the Fujitsu Way, maintaining close communications with all of its various stakeholders. We work to remain highly sensitive to social issues, and to take responsible corporate action.

*1 The Fujitsu Group's Stakeholders:

The Group sees its customers, employees, business partners, shareholders and investors, and global and local communities as its stakeholders. Government authorities, NPOs, and NGOs are particularly important stakeholders in these global and local communities.

- [FUJITSU Way](#)



Our Corporate Philosophy "FUJITSU Way"

The Fujitsu Way embodies the philosophy of the Fujitsu Group, our reason for existence, values and the principles that we follow in our daily activities.

Introduction

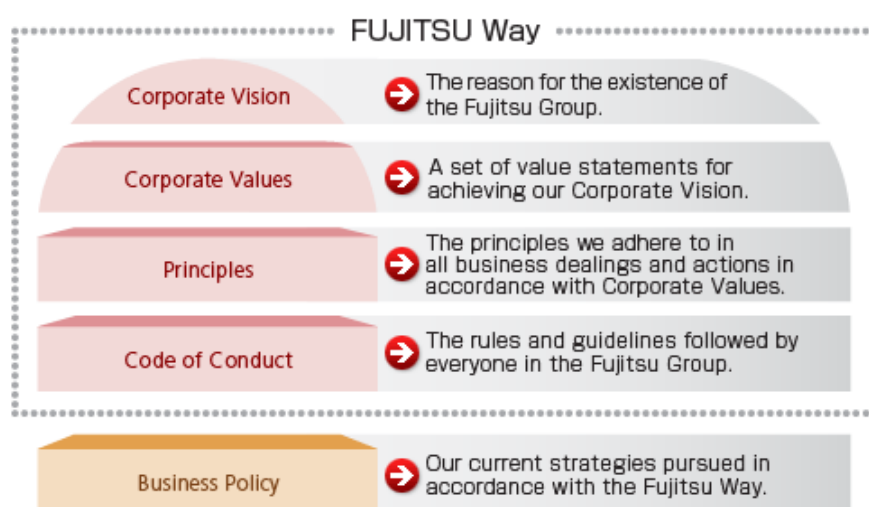
On April 1, 2008, Fujitsu announced a fully revised Fujitsu Way.

The Fujitsu Way will facilitate management innovation and promote a unified direction for the Fujitsu Group as we expand our global business activities, bringing innovative technology and solutions to every corner of the globe.

The Fujitsu Way provides a common direction for all employees of the Fujitsu Group. By adhering to its principles and values, employees enhance corporate value and their contributions to global and local societies.

The Elements of FUJITSU Way

Fujitsu Way comprises four core elements:



Corporate Vision

Through our constant pursuit of Innovation, the Fujitsu Group aims to contribute to the creation of a networked society that is rewarding and secure, bringing about a prosperous future that fulfills the dreams of people throughout the world.

[Corporate Vision >>](#)

Corporate Values

What we strive for:

Society and Environment	In all our actions, we protect the environment and contribute to society.
Profit and Growth	We strive to meet the expectations of customers, employees and shareholders.
Shareholders and Investors	We seek to continuously increase our corporate value.
Global Perspective	We think and act from a global perspective.

What we value:

Employees	We respect diversity and support individual growth.
Customers	We seek to be their valued and trusted partner.
Business Partners	We build mutually beneficial relationships.
Technology	We seek to create new value through innovation.
Quality	We enhance the reputation of our customers and the reliability of social infrastructure.

[Corporate Values](#) >>

Principles

Global Citizenship	We act as good global citizens, attuned to the needs of society and the environment.
Customer-Centric Perspective	We think from the customer's perspective and act with sincerity.
Firsthand Understanding	We act based on a firsthand understanding of the actual situation.
Spirit of Challenge	We strive to achieve our highest goals.
Speed and Agility	We act flexibly and promptly to achieve our objectives.
Teamwork	We share common objectives across organizations, work as a team and act as responsible members of the team.

[Principles](#) >>

Code of Conduct

- We respect human rights.
- We comply with all laws and regulations.
- We act with fairness in our business dealings.
- We protect and respect intellectual property.
- We maintain confidentiality.
- We do not use our position in our organization for personal gain.

[Code of Conduct](#) >>

Business Policy

- We use Field Innovation to find new approaches and the inspiration to improve ourselves, while delivering added value to our customers.
- We provide global environmental solutions in all our business areas.
- Fujitsu Group companies work together to accelerate our global business expansion.

[Business Policy](#) >>

Activities to Disseminate the Fujitsu Way

Promoting Group-wide dissemination

In the Fujitsu Group, all Group companies around the world adopt the Fujitsu Way and reflect it in their activities, creating a unified direction for the enhancement of corporate governance.

Business unit directors and company presidents each select one Fujitsu Way leader, who then work with top management to further disseminate the Fujitsu Way in ways appropriate to their organizations.

Working with Fujitsu Way leaders

To ensure deeper dissemination of the Fujitsu Way within the Fujitsu Group, Fujitsu Way leaders gather to share information on rolling out dissemination activities at each organization.

Fujitsu Way Conference

In November 2012, Fujitsu Way leaders in Japan gathered for the Fujitsu Way Conference. At the conference, the vice president of Fujitsu expressed the expectations that management had to all employees at the time the Fujitsu Way was established. In looking back at the factors for success in projects and business activities, leaders expressed the importance of setting an example of executing the Fujitsu Way for other employees. Streaming video of the conference was made available to all employees.



Masami Fujita
Corporate SEVP & Representative Director

Fujitsu Way Leader Training Program

The training program primarily for newly appointed Fujitsu Way leaders was also held for FY2012. The program included time for participants to get a feel for the starting point for the Fujitsu Way embodied in historic Fujitsu products on display at the Fujitsu DNA exhibition hall, an employee training center at the Numazu Plant. The event provided an opportunity to share information on best practices for disseminating the Fujitsu Way in the Fujitsu Group and to discuss good examples displayed by the leaders. As a result, participants expressed strengthened pride in the Fujitsu Group and commitment to disseminate the Fujitsu Way further.

Implementation of e-Learning

An e-Learning program designed to promote understanding of Fujitsu Way basics has been provided for Fujitsu Group employees worldwide. About 90% of Group employees have completed the course.

The nearly 100,000 Group employees who were trained in the first half of FY 2009 in Japan studied the words of senior management over the years and reconfirmed the origins of the Fujitsu Way. Outside of Japan, we began offering the e-Learning program in 16 languages from FY 2011. To date, some 50,000 employees overseas have taken part in the program. (A cumulative total of around 60,000 hours was spent on employee training worldwide as of March 31, 2013.)

Providing more Fujitsu Way tools

Wallet-sized cards and booklets explaining the Fujitsu Way are distributed to Group employees around the world, with posters also posted at workplaces. In FY2012, booklets are made available in 18 languages. In addition, a video of president Yamamoto explaining the underlying meaning of the Fujitsu Way is on the corporate intranet. The video includes a message about Fujitsu's contribution to society through its business activities.

Division Activities to Disseminate the Fujitsu Way

Fujitsu Way leaders, in cooperation with managers, spearhead efforts to advance activities for disseminating the Fujitsu Way among employees. In conducting activities, leaders and managers seek ways to clarify connections between each division's own policies and objectives and the Fujitsu Way.

Dissemination Activity Examples

FUJITSU UNIVERSITY, Ltd.

In FY 2012, we set forth the following three areas of focus for dissemination activities at Fujitsu University (FJU). The activities were carried out in small groups.

- (1) Recognize the Fujitsu Way's connection to the FJU medium-term plan, strategic objectives for each group, and the mission of every employee
- (2) Link daily business activities with execution of the Fujitsu Way
- (3) Promote understanding of the Fujitsu Way among other group activities at FJU

Inviting all employees, including executives, to participate in a kick-off session in July, cross-organizational follow up meeting in September, and panel exhibition showcasing activity achievements in February, we have achieved the following:

- Through these activities, employees reconfirmed the Fujitsu Way's connection to their own department's policies, and their own daily work, and enhanced their awareness of the Fujitsu Way.
- Each employee had time to carefully think about his or her own tasks, and was able to clearly reconfirm the individual actions they should be taking.
- At the cross-organizational follow up meeting, representatives from each small group explained the value and content of their activities. Through this dialogue, all employees gained a better understanding of one another while also fostering a better sense of project ownership and unity as a company and re-energizing their commitment to Fujitsu Way activities.

Comments from Fujitsu Way Administrators

The employee training and development of teaching materials since FY 2009 has encouraged employees to naturally reflect the spirit of principles such as "Customer-Centric Perspective," "Firsthand Understanding," and "Teamwork" in their actions. We recognize these activities are helping to improve customer satisfaction in the Group.



Cross-organizational follow up meeting



Reporting of Fujitsu Way activity achievements

CSR Policy

CSR at Fujitsu is practiced by implementing the Fujitsu Way. In all its business activities, by implementing the Fujitsu Way in light of the expectations and needs of multiple stakeholders, the Fujitsu Group contributes to the sustainable development of society and the planet. Our CSR initiatives focus on the five challenges below. In addressing these challenges, we demonstrate a commitment to responsible business operations as a global ICT company.

To Advance CSR Activities as an Integral Part of Business

In December 2010, the Fujitsu Group established a corporate social responsibility (CSR) policy and determined five priority issues around which it will focus its CSR practices.

Based on this CSR policy, the Group will focus on five priorities in a more forceful response to the multiple needs and expectations of stakeholders so as to contribute to the sustainable development of society and the planet, discharging its responsibilities as a truly global ICT company. In addressing the priority issues, Fujitsu will set short- and medium-term objectives and follow the PDCA cycle in making actual progress. This progress will be disclosed within and outside the company and shared while CSR activities are being made an integral part of management.

In setting priorities, the CSR Promotion Committee, which has representatives from all concerned departments of the Company, formed a basic strategy working group that considered the Global Reporting Initiative guidelines and other internationally recognized CSR norms, identified global social problems, and held repeated discussions to decide those which Fujitsu should address as priorities. Two dialogue sessions were also held with stakeholders, in which they were represented by outside experts, deepening our understanding of their needs and expectations.



Masami Fujita
Corporate SEVP & Representative Director

Five Priority Issues

Fujitsu will focus on the following five priority issues in implementing its CSR practices. By pursuing these issues, Fujitsu will promote responsible management as a global ICT company.

The five priority issues that the Fujitsu Group will focus on fall into three categories.

Addressing Society's Challenges through Corporate Activities

The Fujitsu Group will contribute to the sustainable development of society and the planet by addressing a variety of society's challenges through its corporate activities.

- **Priority 1: Providing Opportunities and Security Through ICT**

Fujitsu will contribute to the creation of a society where ICT connects and supports the world's 7 billion people, providing them with security and opportunities to pursue their dreams.

- **Priority 2: Protecting the Global Environment**

Fujitsu will contribute to the resolution of global environmental challenges through ICT, while at the same time reducing the Fujitsu Group's own environmental footprint.

Strengthening the Foundation of CSR Activities

To contribute to the sustainable development of society, Fujitsu will strengthen the foundation of its CSR activities to foster an environment in which employees develop a global perspective and actively participate in the Company's CSR activities.

- **Priority 3: Embracing Diversity and Inclusion**

Fujitsu will promote diversity in its human resources, irrespective of nationality, gender, age, disability, or values to enable individuals to grow with the company.

- **Priority 4: Developing Human Resources for Their Contribution to Society and the Planet**

Fujitsu will lead the way in cultivating employees who, from a global perspective, are pioneers in contributing to the advancement of society.

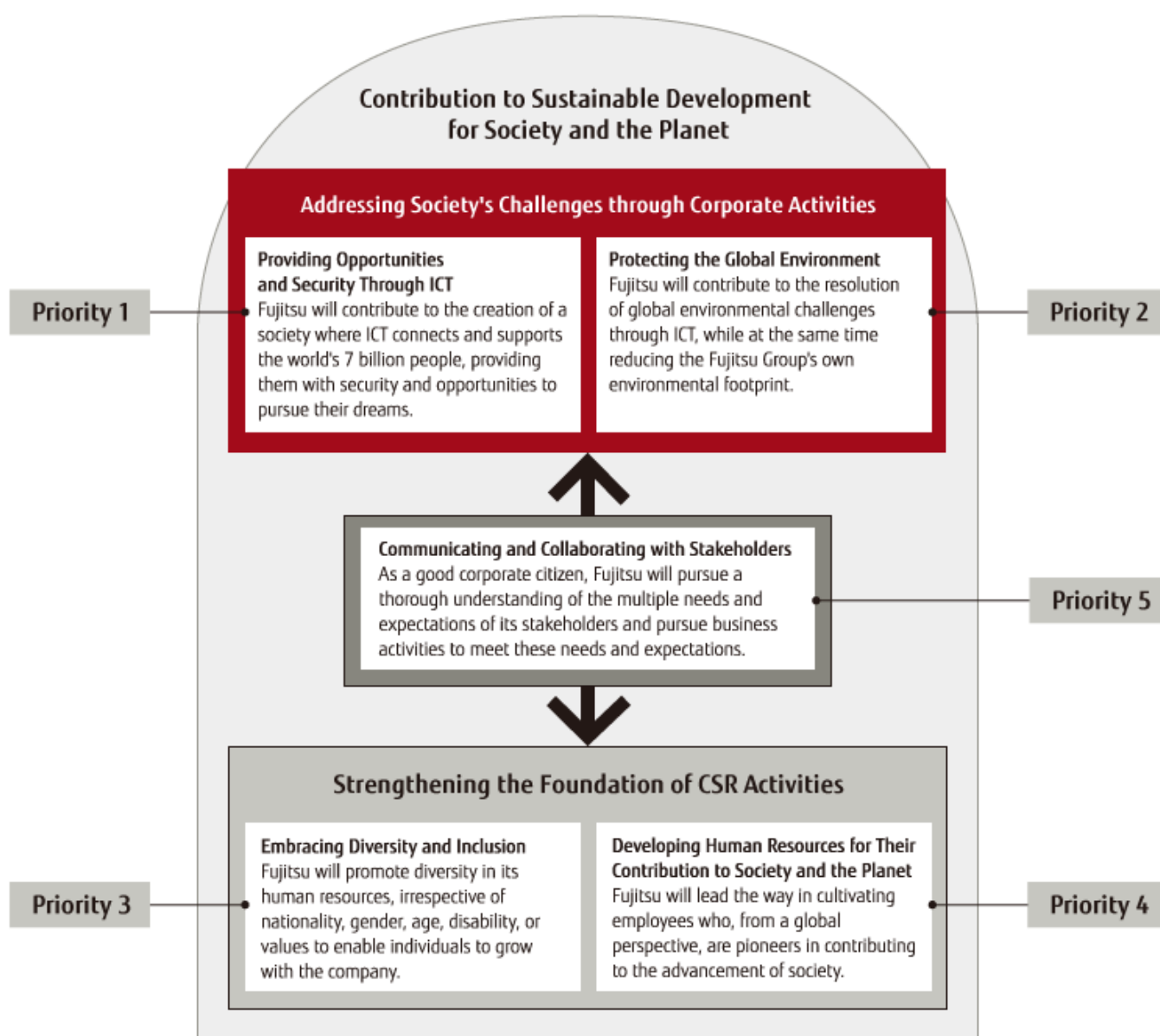
Communicating and Collaborating with Stakeholders

In order to promote the initiatives outlined above from multiple perspectives, Fujitsu will build relationships with a broad base of stakeholders, going beyond the boundaries of the Company's existing business.

- **Priority 5: Communicating and Collaborating with Stakeholders**

As a good corporate citizen, Fujitsu will pursue a thorough understanding of the multiple needs and expectations of its stakeholders and pursue business activities to meet these needs and expectations.

Specific initiatives:



Organization Promoting CSR

Company-wide Committees

Three committees have been set up and charged with promoting the uptake and firm establishment of the Fujitsu Way as the cornerstone of the Fujitsu Group's CSR activities. Reporting directly to the Management Council, they are the Fujitsu Way Promotion Council, Risk Management & Compliance Committee, and the Environmental Management Committee.



CSR Promotion Committee

The CSR Promotion Committee discusses matters such as establishing key performance indicators (KPIs) regarding CSR, distribution of information, examples of social contribution activities, and how to manage sustainable social business.

To promote CSR management across the entire Fujitsu Group, the CSR Promotion Committee, under the chairmanship of the vice president and representative director (for corporate affairs) and with administrative support from the CSR Promotion Department, began in FY 2012 to hold regular reviews of CSR activities at Board of Directors' and Management Council meetings.



March 2013 meeting of the CSR Promotion Committee

Dissemination of the CSR Policy

As a means to disseminate our CSR Policy throughout the company, we set up a CSR portal site on our intranet in FY 2012. The site has allowed for the sharing of information about CSR workgroups and forums, and provides a guide to basic CSR terminology and an e-Learning course that teaches all Fujitsu employees about CSR-related Fujitsu initiatives and basic CSR terminology.

We also held briefings to discuss Sustainability Report, along with seminars with CSR experts, for some 6500 people throughout the Group, which included Fujitsu employees and directors, as well as executives at Group companies and other business sites in Japan. These opportunities enabled the sharing of Fujitsu initiatives and corporate ideals and received high praise on questionnaires.



Fujitsu Group Sustainability Report 2012 briefing / seminar

Furthermore, we continue to bring a social perspective to evaluation of quality improvement initiatives.

United Nations Global Compact

Fujitsu announced its support of the United Nations Global Compact in December 2009. The Fujitsu Group is committed to global CSR activities that uphold the 10 principles of the Global Compact. Through this commitment, we will meet the demands of various stakeholders in international society, and uphold responsible management as a true global ICT company contributing to the creation of a sustainable society.



What is the Global Compact?

The UN Global Compact consists of 10 principles in the four areas of human rights, labor standards, the environment, and anti-corruption with which companies should rigorously comply.

Human Rights

- Principle 1: Businesses should support and respect the protection of internationally proclaimed human rights; and
- Principle 2: make sure that they are not complicit in human rights abuses.

Labor

- Principle 3: Businesses should uphold the freedom of association and the effective recognition of the right to collective bargaining;
- Principle 4: the elimination of all forms of forced and compulsory labor;
- Principle 5: the effective abolition of child labor; and
- Principle 6: the elimination of discrimination in respect of employment and occupation.

Environment

- Principle 7: Businesses should support a precautionary approach to environmental challenges;
- Principle 8: undertake initiatives to promote greater environmental responsibility; and
- Principle 9: encourage the development and diffusion of environmentally friendly technologies.

Anti-Corruption

- Principle 10: Businesses should work against corruption in all its forms, including extortion and bribery.

As of July 31, 2012

Please refer to [the GRI Guideline Comparison Table](#) which shows the relationship between the United Nations Global Compact and CSR activities we conducted in FY 2012, contained in the Fujitsu Group Sustainability Report 2013 (Detailed Version).

We have been reporting our COP (Communication on Progress) at the Advanced Level since FY 2012.

Socially Responsible Investment (SRI)

Fujitsu has been incorporated into the SRI stock indexes and SRI funds listed below.

Status of Inclusion in SRI-related Stock Indexes

Name of Index	Rating Company
Dow Jones Sustainability Indexes (World, Asia Pacific) 	Dow Jones Indexes (U.S.), SAM Group (Switzerland)
FTSE4Good Index Series 	FTSE International, Ltd. (UK)
oekom research 	oekom research AG(Germany)
Morningstar Socially Responsible Investment Index 	Morningstar Japan K.K.

Status of Inclusion in Major SRI Funds (Japan)

Name of Fund	Operating Company
Sompo Japan Green Open (Buna no Mori)	Sompo Japan Nipponkoa Asset Management Co., Ltd. (As of April 2013)
Mitsubishi UFJ SRI fund (Family Friendly)	Mitsubishi UFJ Asset Management Co., Ltd. (As of February 2013)
Nikko Eco Fund	Nikko Asset Management Co., Ltd. (As of May 2013)
Daiwa SRI Fund	Daiwa Asset Management Co., Ltd. (As of February 2013)
Sompo Japan SRI Open (Mirai no Chikara)	Sompo Japan Nipponkoa Asset Management Co., Ltd. (As of March 2013)

5 Priorities of Fujitsu Group's CSR and CSR Activity Targets and Achievements

Basic Policy	Category	FY 2012 Targets
CSR Basic Management	Promoting CSR Activities Across the Group	<ul style="list-style-type: none"> Explore measures for completing remaining items and ranking their priority. Expand items covered by the checklist for Group companies, including those overseas.
	Implementing the PDCA Cycle Based on Our Vision	<ul style="list-style-type: none"> Establish medium-term CSR targets and single fiscal year targets for PDCA processes. Announce detailed plans for issues we should tackle heading toward 2020. Begin work on strengthening processes and setting specific goals when formulating organizational targets.
	CSR Penetration and Execution	<ul style="list-style-type: none"> Renovate tools for infusing the CSR Policy throughout the organization, including Internet-based frameworks, in-house publications, and events. Enhance systems encouraging employees to voluntarily take part in linking the CSR Policy to their work. <ul style="list-style-type: none"> Expand the CSR Promotion Task Force's scope to more departments. Enhance employee education through questionnaires, e-Learning, round-table discussions for employees, and the like. Introduce an award program.
Priority 1 Providing Opportunities and Security Through ICT	Providing New Values Through ICT	<ul style="list-style-type: none"> Expand programs utilizing sophisticated computing to address social issues. Generate multiple examples of viable businesses in the form of ICT-enabled solutions for social issues in areas like medicine, education, and food. Examine introducing an evaluation system for projects designed to solve social issues.
	Increasing ICT Accessibility	<ul style="list-style-type: none"> Incorporate diverse stakeholders' opinions and conduct field tests to further the development of products that deliver great ICT experiences to more people. Conduct surveys to ascertain the issues and identify areas where ICT should make a difference (e.g., estimate benefits, establish processes), with a view to creating more solution businesses in developing countries.
	Reliability and Security through ICT	<ul style="list-style-type: none"> Continue and strengthen FY 2011 initiatives. Strengthen responsiveness to government policies for enhancing IT security. Promote the advancement of a global communications platform.
Priority 2 Protecting the Global Environment	Benefitting Customers and Society	<ul style="list-style-type: none"> Provide green ICT that will reduce cumulative CO₂ emissions worldwide by 15 million tons for the FY 2009-12 period. Achieve a 3% reduction in level of impact (in main business areas) compared to FY 2009 as evaluated by BD integration index-numerical indicators developed to measure impact of operations on biodiversity, as part of a system to expand the contribution of ICT to reducing that impact.
	Pursuing Internal Reforms	<ul style="list-style-type: none"> Reduce total greenhouse gas emissions globally to 6% below FY 1990 levels by end of FY 2012 (CO₂: 5% reduction; other greenhouse gases: 20% reduction). Reduced CO₂ emissions from domestic transport to 15% below FY 2008 levels by the end of FY 2012. Increased renewable energy usage ratio to 10 times FY 2007 levels by the end of FY 2012.
Priority 3 Embracing Diversity and Inclusion	Corporate Culture Reform	<ul style="list-style-type: none"> Further advance human rights training and enlightenment and their diffusion throughout domestic Group companies. Enhance individual support and other steps to further develop the diversity promotion measures. Work to increase the rate of positive responses to working environment-related items on the diversity awareness survey by looking closely at the issues.
	Helping Individuals Flourish	<ul style="list-style-type: none"> Expand positive action (e.g., utilization of diversity mentors for female employees). More effectively augment networking events. Work to increase the rate of positive responses to individual awareness-related items on the diversity awareness survey by looking closely at the issues.
	Promoting a Work-Life Balance	<ul style="list-style-type: none"> Work to increase the rate of positive responses to work-life balance-related items on the diversity awareness survey by looking closely at the issues.
Priority 4 Developing Human Resources for Their Contribution to Society and the Planet	Working to Develop Employees Who Can Support a Truly Global ICT Company	<ul style="list-style-type: none"> Foster global business leaders. <ul style="list-style-type: none"> Promote diversity among the next generation of business leaders by strengthening ties with overseas business bases. Enhance the quality and scope of business leaders through continued training. Strengthen the baseline. <ul style="list-style-type: none"> Reinforce baseline training to ensure that every employee understands and acts in accordance with our corporate philosophy. Increase training opportunities for generating business from social and market changes.
Priority 5 Communicating and Collaborating with Stakeholders	Stakeholder Communications	<ul style="list-style-type: none"> Reflect the opinions of a wide range of stakeholders regarding our CSR initiatives and sustainability report in our actual corporate activities. Engage in periodic dialogue with residents to promote development in neighboring communities.
	Collaboration with Stakeholders	<ul style="list-style-type: none"> Build relationships with NGOs, NPOs, international organizations, and other diverse stakeholders, and resolve social issues through our business operations. Create forums conducive to innovation creation through dialogue with diverse stakeholders.
	Harmony with Society	<ul style="list-style-type: none"> Examine introducing an evaluation system for programs promoting co-existence with society. Enhance social contribution programs capitalizing on the Fujitsu Group's expertise.

FY 2012 Performance

	<ul style="list-style-type: none"> • Leveraged ISO 26000 to survey the status of CSR activities at 117 Group companies, including overseas. • Ranked priorities and identified issues to address based on importance/risk analysis of results of above. 	★★★
	<ul style="list-style-type: none"> • Performed reviews and approvals of CSR goals and key activities, with a Corporate Senior Executive Vice President as chair of the CSR Promotion Committee. • Through unified messages (reports, exhibits, etc.), announced Fujitsu's intent to enact societal change by 2020 through The Power of ICT. • Established guidelines for setting goals for divisions, based on CSR priority issues and Fujitsu's top vision. 	★★★
	<ul style="list-style-type: none"> • Began disseminating information through a CSR information portal site for all Group employees. • Implemented the following to promulgate the CSR Policy among all employees. <ul style="list-style-type: none"> – e-Learning concerning CSR activities. – Questionnaire for all employees concerning CSR priority issues (2,442 responses). – CSR briefing for about 500 Fujitsu and Group company executives. – Ongoing evaluation of quality improvement activities based on social perspectives. 	★★★
	<ul style="list-style-type: none"> • In Japan and overseas, promoted our Smart City business (to address air pollution, energy management, and transportation) that leverages the power of supercomputers. • Established 7 key innovation sectors for the expansion of businesses that resolve social issues. • Set "Build a better society" and "Empower people" as "New Role of ICT" in the Fujitsu Technology and Service Vision. 	★★★
	<ul style="list-style-type: none"> • Implemented the following as universal design initiatives. <ul style="list-style-type: none"> – Received multiple international universal design awards for our smartphones for seniors. Rolled out these products to the European market. – Expanded the scope of accessibility JIS standards to our entire public website. • Created prototypes for resolving issues in emerging countries (India, Laos, Myanmar, etc.). 	★★
	<ul style="list-style-type: none"> • Conducted e-Learning on security for all Fujitsu executives and employees, with nearly 100% attendance. • Supported activities by the World Economic Forum (WEF) to strengthen cyber security. • Continued to gradually adopt standardized communication platforms in domestic and overseas Fujitsu Group companies. Completed implementation for Fujitsu Limited and 75 domestic Group companies, covering about 68,000 employees (as of May 28, 2013). 	★★★
	<ul style="list-style-type: none"> • Through the provision of green ICT, contributed to reduction of cumulative CO₂ emissions from customers and society by 15.61 million tons for the FY 2009-12 period. • Achieved a 9.6% reduction in level of impact (in main business areas) compared to FY 2009 as evaluated by BD integration index-numerical indicators developed to measure impact of operations on biodiversity, as part of a system to expand the contribution of ICT to reducing that impact. 	★★★
	<ul style="list-style-type: none"> • Reduced total greenhouse gas emissions globally to 24.4% below FY 1990 levels by the end of FY 2012. • Reduced CO₂ emissions from domestic transport to 32% below FY 2008 levels by the end of FY 2012. • Increased renewable energy usage ratio to 11.9 times FY 2007 levels by the end of FY 2012. 	★★★
	<ul style="list-style-type: none"> • Conducted ongoing human rights training and enlightenment for plants, subsidiaries, workplaces, and domestic Group companies. • Began establishment of human rights management structure (human rights due diligence) based on the United Nations Guiding Principles on Business and Human Rights. • Implemented the following as workplace diversity promotion activities. <ul style="list-style-type: none"> – Conducted interviews with 30 Heads of Units (including executives) to assess the status of workplaces. – Rolled out e-Learning in domestic Group companies. • Achieved a 78.2% positive response (a 0.2-point increase over the previous year) to item "Feel pride in working at Fujitsu Group" in employee satisfaction survey. 	★★★
	<ul style="list-style-type: none"> • Implemented positive action at Fujitsu. <ul style="list-style-type: none"> – Implemented development program for women leaders (46 attendees). • Held attribute-specific events (including at domestic Group companies) to promote networking by employees who are involved in child care or nursing care, employees who are foreigners, employees with disabilities, etc. • Ratio of female executives at Fujitsu: 4.0%; Ratio of employees with disabilities: 2.00%. 	★★★
	<ul style="list-style-type: none"> • Performance in usage of work systems at Fujitsu: <ul style="list-style-type: none"> – Employees taking child care leave: 186; Employees taking leave for wife's childbirth: 510. • Conducted survey related to nursing care and, based on the results, held forum (also targeting domestic Group companies) concerning improvement of work styles for balancing jobs with nursing care. • Prepared an ICT-based telecommuting environment to achieve more diverse work styles. 	★★★
	<ul style="list-style-type: none"> • Fostered global business leaders. <ul style="list-style-type: none"> – Promoted diversity by increasing the number of attendees from overseas Group companies in the next-generation business leader training program (92 attendees). – Leadership development program targeting overseas sites (59 participants). – Global competency nurturing program targeting young employees in Japan (103 attendees). • Strengthened baseline education. <ul style="list-style-type: none"> – Reviewed baseline education system from the respective standpoints of executives and regular employees. 	★★★
	<ul style="list-style-type: none"> • Implemented the following as part of stakeholder communication. <ul style="list-style-type: none"> – Conducted questionnaire on our Sustainability Report and analyzed comments (142 comments) from consumers, shareholders, etc. – Engaged in periodic dialogue with residents in regions with major business sites (75 times). • Gave lectures on corporate social responsibility in cooperation with neighboring communities, to widely introduce and publicize our initiatives to communities. 	★★★
	<ul style="list-style-type: none"> • Provided cloud-enabled environment and life form surveying tools, free of charge, to a total of 10 NGOs and NPOs (out of 41 requests received). • Held 11 sessions of dialogues with experts on topics of diversity, human resource utilization, human rights, BOP, universal design, and the environment. 	★★★
	<ul style="list-style-type: none"> • Implemented the following as part of social contribution programs. <ul style="list-style-type: none"> – Launched a program to provide support systems for NPOs, supporting their work efficiency. – Achieved a total of about 2,000 internal database records of social contribution activities linked to local communities. – Dispatched a total of about 300 volunteers to regions affected by the Great East Japan Earthquake. 	★★

Level of achievement ★★★: Achieved plan targets ★★: Not all plan targets were achieved and some issues remain to be addressed ★: Plan targets have not been achieved

FY 2013 Targets

Medium-Term Targets (FY 2020)

<ul style="list-style-type: none">• Create improvement process suggestions for issues identified in FY 2012, and extend these across Group companies.	<ul style="list-style-type: none">• We have CSR management processes in place across the Group and implement CSR initiatives in line with global standards, including those for value chains.
<ul style="list-style-type: none">• In Fujitsu's business vision, reflect those areas in which Fujitsu will address resolution of social issues through its business.• Implement measures to promote the use of guidelines mentioned at the left.	<ul style="list-style-type: none">• We work continuously to bring our CSR efforts to the next level by setting shared short and medium-term targets for the entire Group and utilizing the PDCA (plan, do, check, act) cycle.
<ul style="list-style-type: none">• Start disseminating information within and outside the company using SNS.• Hold study sessions and workshops aimed at global penetration of CSR standards.• Reflect opinions from internal questionnaires in CSR activities.	<ul style="list-style-type: none">• Fujitsu Group employees take it upon themselves to promote CSR with a comprehensive view to economic, environmental, and social dimensions.
<ul style="list-style-type: none">• Continue and strengthen the initiatives at the left.• Create multiple examples of solutions related to core areas like medicine, education, and food.	<ul style="list-style-type: none">• We are using global cutting-edge computing to generate simulations of the future, and employing them to help solve an array of tough problems like climate change, resource shortages, and disaster damage. In addition, we are globally deploying ICT-enabled solutions for various issues affecting cities, food, medicine, education, and more.
<ul style="list-style-type: none">• Continue and strengthen the initiatives at the left.• Strengthen initiatives to commercialize solution businesses in emerging countries.	<ul style="list-style-type: none">• So that as many people as possible in the world can leverage ICT to pursue their potential, we are opening doors to cyber society, providing devices and interfaces that are easy to use for all, and offering systems supporting ICT deployment to developing countries.
<ul style="list-style-type: none">• Continue and strengthen the initiatives at the left.• Expand solutions to secure total security and privacy.	<ul style="list-style-type: none">• We deliver reliability and security through the stable operation of ICT systems, the infrastructure underpinning economic and social activity. Further, we provide ICT solutions to realize highly secure environments where personal and proprietary information is protected.
<ul style="list-style-type: none">• Through the provision of ICT, reduce cumulative greenhouse gas emissions from customers and society by 26 million tons through FY 2015.• Through FY 2015, provide funding, technology, and human resource support for activities addressing the resolution of social and environmental issues such as biodiversity.	<ul style="list-style-type: none">• By providing technologies and solutions, we are moving closer to our target of reducing CO₂ emissions by 30 million tons a year in Japan by 2020, and helping to cut greenhouse gas emissions worldwide.• We are advancing and taking concrete measures regarding all of the items outlined in the "Business and Biodiversity Initiative" leadership declaration.
<ul style="list-style-type: none">• Reduce greenhouse gas emissions from workplaces to 20% below FY 1990 levels by the end of FY 2015.• Reduce CO₂ emissions from transport per unit of sales by 4% or more compared to FY 2011 levels.• Expand renewable energy purchase from external sources and generation capacity.	<ul style="list-style-type: none">• The Fujitsu Group boasts world-leading overall energy efficiency in each of its business fields, including software services, hardware products, and electronic devices.
<ul style="list-style-type: none">• Further promote training and enlightenment for Fujitsu and domestic Group companies, led by the Human Rights Enlightenment Committee.• Advance the process of establishing a human rights management structure (human rights due diligence).• Implement new measures in workplaces to address issues uncovered in the Head-of-Unit interviews.• Strengthen initiatives to address factors that were strongly related to improvement of employee satisfaction in the FY 2012 survey.	<ul style="list-style-type: none">• We offer a good working environment for everyone, thanks in part to measures to further human rights promotion and diversity.• Our corporate culture fosters ongoing creation of new knowledge and technologies inside and outside the organization through open and free discussion from a wealth of perspectives.
<ul style="list-style-type: none">• Expand positive action for women at Fujitsu (enhance training and diversity mentor program; consider support for active work by young women employees).• More effectively implement networking events for all attribute groups.	<ul style="list-style-type: none">• Fujitsu is creating workplaces in which employees recognize each other, and can exhibit the full added value they possess to contribute to the organization.
<ul style="list-style-type: none">• Consider measures based on results related to work-life balance that were uncovered in the survey of diversity awareness.• Promote telecommuting using ICT to help achieve more diverse work styles.	<ul style="list-style-type: none">• We are helping every employee to achieve a work-life balance and maintain a mutually beneficial relationship with society.
<ul style="list-style-type: none">• Continually perform "program development for selected employees based on human resource strategy" and "global competency development program for young employees in Japan" to nurture global business leaders.• Roll out baseline education that is systemized according to job function and role.	<ul style="list-style-type: none">• We are contributing to the advancement of society by fostering business leaders that can balance the pursuit of business strategies with the creation of social value.• Every employee grasps and acts in accordance with our corporate philosophy to create new value for society.
<ul style="list-style-type: none">• Conduct CSR activities based on analysis of comments from the questionnaire.• Continue dialogue with local residents and companies to promote development in neighboring communities.	<ul style="list-style-type: none">• We have forged relationships built on trust with diverse stakeholders by maintaining mutual lines of communication.
<ul style="list-style-type: none">• Through our business operations, expand social issue resolution and relationship building with NGOs, NPOs, international organizations, and other diverse stakeholders.• Promote sustainable co-existence with society by reflecting the opinions of diverse stakeholders in our corporate activities.	<ul style="list-style-type: none">• Fujitsu Group employees practice optimal collaboration with stakeholders in delivering value which meets society's needs.
<ul style="list-style-type: none">• Promote social contribution activities using our internal award program.• Implement the following as part of social contribution programs.<ul style="list-style-type: none">– Establish a next-generation human resource training program that leverages the strengths of the Fujitsu Group.– Improve and promote local social contribution activities that leverage our internal database.– Expand and improve systems for the further promotion of volunteer activities.	<ul style="list-style-type: none">• Most employees take part in social contribution activities that leverage their strengths.

CSR Activities Utilizing ISO 26000

Strengthening Global CSR Management

The Fujitsu Group signed the United Nations Global Compact in December, 2009 and has since taken steps to pursue CSR management in line with global standards. We also submitted our COP (Communication on Progress) at the Advanced level in 2012. In FY 2013, we verified the status of the Fujitsu Group's CSR activities which were covered in the last survey, and launched initiatives for improvement.

ISO 26000 Project organization chart (Project office: CSR Department)

ISO 26000 (The seven core subjects)	Department(s) in charge
Organizational Governance	FUJITSU Way Unit, Risk Management & Compliance Unit, Global Business Management Unit
Human rights	Human Resources Management & Employee Relations Div.
Labor practices	Employee Relations Dept.
The Environment	Corporate Environmental Strategy Unit
Fair Operating Practices	Risk Management & Compliance Unit, Purchasing Unit, Intellectual Property Unit, Global Business Management Unit
Consumer Issues	Quality Assurance Unit
Community Involvement and Development	Corporate Affairs Div, CSR Department.

1. The Survey for 117 Fujitsu Group Companies

In FY 2012, we conducted a survey of 117 Fujitsu Group companies (80 domestic and 37 overseas; 104 subsidiaries) and reviewed the results at the CSR Promotion Committee.

The survey was composed of items related to the seven core subjects of the ISO 26000 standard, international standards for social responsibility, and items specified in the Governance Checklist used for internal control at the Fujitsu Group.

This survey was sent out to each company in December 2012 by Mr. Masami Fujita, Corporate SEVP & Representative Director as the general director for the project.

Fujitsu Group CSR (ISO26000) / governance questionnaire

The image shows a collage of documents related to the Fujitsu Group CSR (ISO26000) / governance questionnaire. On the left is a letter from Mr. Masami Fujita, dated December 10, 2012, addressed to the President of each Fujitsu Group Company. The letter discusses the importance of CSR and the survey. On the right are several overlapping images of the questionnaire form itself, which is a detailed table with multiple columns and rows for data entry.

2. Survey Results Feedback

Analyzing responses from the Group companies, we have verified the status of activities at each as of FY 2012 and provided feedback to individual companies.

The results show that the issues need to be addressed especially in the area of "Fair Operating Practices," "Consumer Issues," and "Community Involvement & Development."

We had briefing sessions to present these results and provide guidance on ISO 26000 to 50 group companies in Japan (80 participants) and shared the same information with overseas group companies by using a web-based conference system

3. Future Plan

For improvement and enhancement based on the survey results, we have formed a special team with our Field Innovators and we have identified the issues, using techniques such as "Visualization" and "Logical Analysis," discussed initiatives for improvements. As a first step, we have made decisions about the relevance, importance, and priority of initiatives based on ISO 26000 concepts and selected preferential target areas.

In addition, we have discussed details on significant issues that need to be addressed quickly, such as "Human Rights", "Labor Practices" and "Fair Operating Practices," through analysis of importance and risks for the Fujitsu Group.

With the commitment of top management, the Fujitsu Group will strengthen the Group governance in collaboration with related departments, as well as develop CSR activities, which are being made an integral part of management from a global perspective.



ISO26000 briefing session at Kawasaki Research & Manufacturing Facilities

Fig.1: Process for determining priorities based on the survey results of ISO 26000

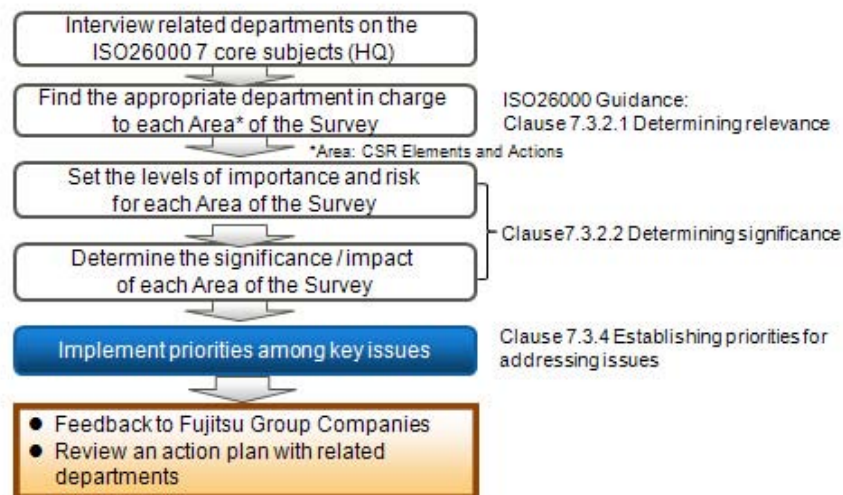
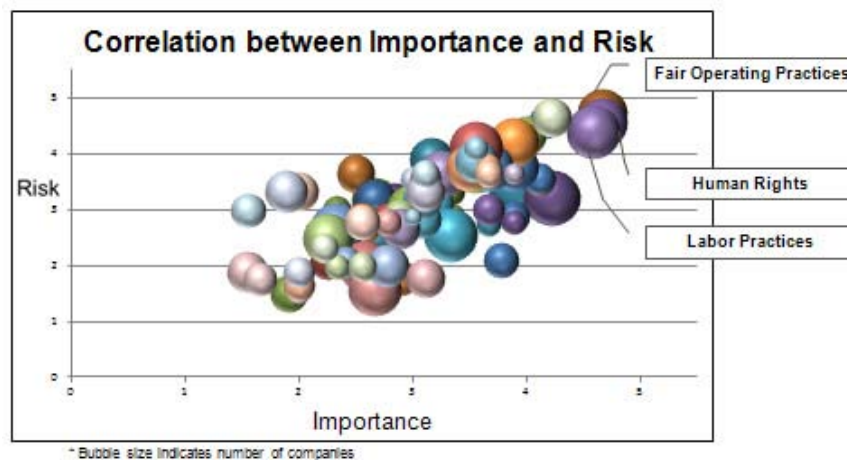


Fig.2: Overview of Correlation between Importance and Risk



Stakeholder's Message

Take CSR Activities to a Higher Level Globally

Utilizing the ISO 26000 framework, we provided support for creation of the CSR (ISO26000) / governance questionnaire and analysis of survey results at Fujitsu Group companies.

Survey results for 117 Group companies clarified issues for the Fujitsu Group. We think Fujitsu needs to prioritize the issues it addresses and steadily upgrade its CSR management globally, while communicating appropriately with its Group companies.



Takehiko Mizukami
CSR Consultant
Cre-en Inc.

Chapter I

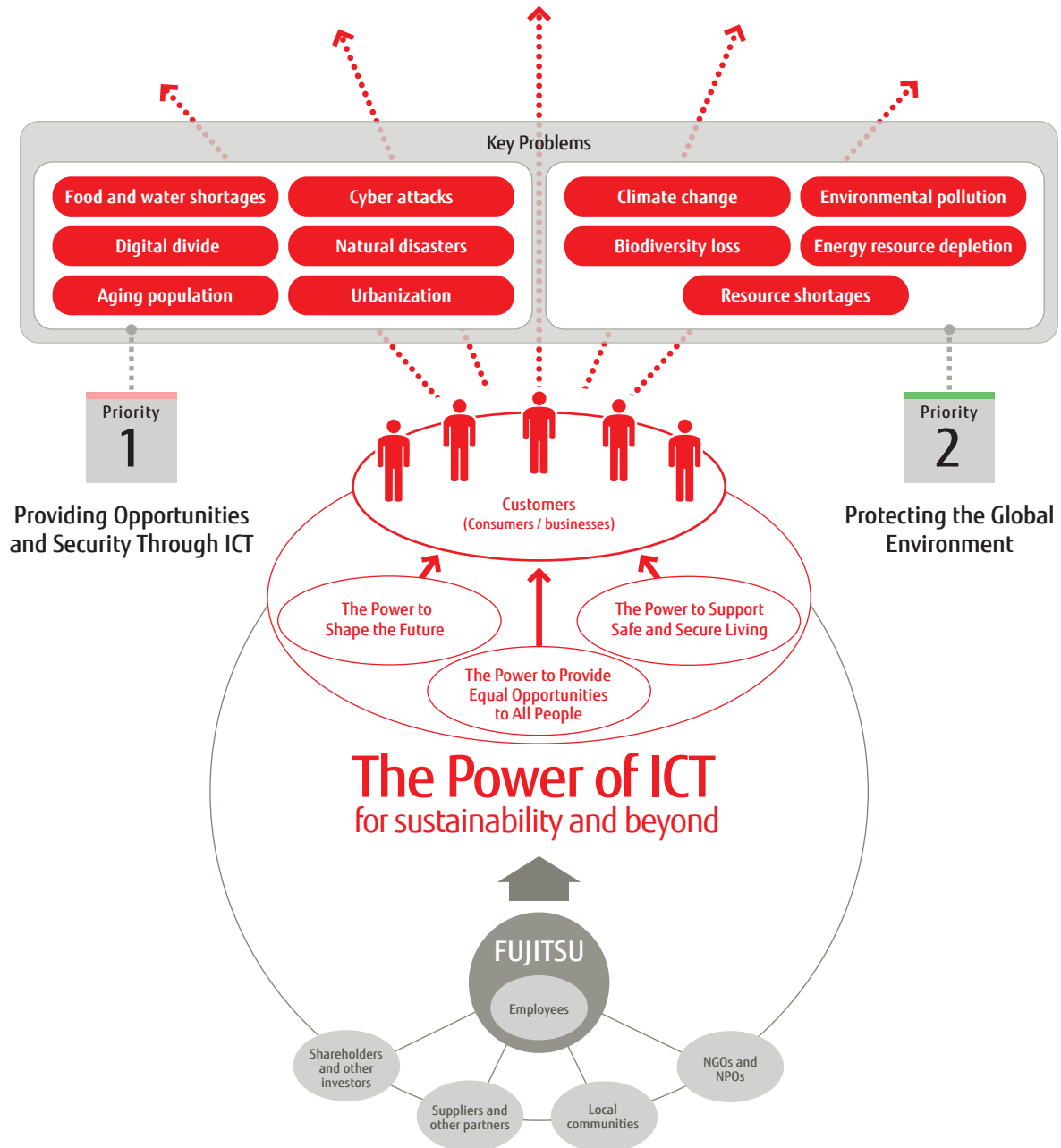
The Power of ICT
for sustainability and beyond

in Our Business

Solving Social Issues and Global Environmental
Challenges through Business Operations



Contributing to Sustainable Futures for the Earth and Society



Creation of New ICT Businesses that Lead to Solutions of Social Issues

The Fujitsu Group has identified two keys for solving social issues through business activities.

The first is the provision of opportunities and a sense of security through ICT. The Fujitsu Group is working to realize a society in which the world's 7 billion people have ICT access, offer highly reliable ICT system infrastructure that supports economic and social activities, and create innovations that overcome social problems.

The other key for solving social issues is acting to protect

the global environment. In response to worsening climate change, the loss of biodiversity, and other global environmental issues, the Fujitsu Group is committed to using ICT to contribute to solutions and to doing everything practicable to lower its own environmental burden.

The Fujitsu Group accepts the challenge of realizing social innovation that helps to solve the social and environmental problems facing humanity.

Looking Back on FY 2012

Using Human-Centric ICT to Solve Social Issues

Fujitsu has put forth its vision of a Human Centric Intelligent Society, and is working to realize business and social innovation based on a view of ICT that begins with human activities. Against a background of advancing technology, ICT has gained the ability to not only improve productivity but also solve various social issues. Through its penetration in daily life, ICT has become a familiar presence that promotes both cooperation among individuals and better decision-making, and supports creative activities. ICT areas have yet to be extensively adopted in fields such as agriculture, visiting care services, and natural disaster mitigation, but here, too, people are beginning to be served by cloud computing and other new technologies. The use of smart devices, the cloud, and big data will bring significant opportunities to daily life, business, and society. It will also, however, mean increasingly complex risks, and there are growing concerns about cyber attacks and protection of privacy.

The Fujitsu Group thinks about the totality of security, governance, and the protection of privacy in its provision of optimal solution services. Fujitsu is committed to the idea that the sophisticated use of information will be a positive force in helping people bring about change in business and society, and in realizing a sustainable future for the global environment.

- [Human Centric Intelligent Society](#)



Hideyuki Saso
Corporate Senior Executive Vice President
and Representative Director, CTO&CMO

The Power to Shape the Future

Key Examples from FY 2012

Flood Disaster Mitigation using Meteorological Simulations (Australia)

Flood disasters due to climate change and urbanization have been increasing in the recent years. In 2010, for example, approximately 200 million people in the world fell victim to flooding. Australia, where approximately 80% of the population is concentrated in coastal areas, was no exception. 8, Abnormal precipitation is a growing cause of flood disasters there and decreasing flood-related risks is of considerable importance to the nation.

Fujitsu, in collaboration with the National Computational Infrastructure (NCI) led by the Australian National University (ANU), is focusing on climate change, disaster prevention, and flood research using meteorological simulation. NCI's new supercomputer, constructed with Fujitsu in June 2012, offers peak performance of 1.2 Pflops and is the most powerful system in the Southern Hemisphere, Fujitsu, in its partnership with NCI, expects that this system will provide accurate weather forecast simulations for better disaster prevention, prompt responses to flooding, and a greater understanding of the environmental challenges facing Australia.

By utilizing these HPC technologies, Fujitsu aims to contribute to the mitigation of flood disasters in Australia, and many other countries around the world.



The supercomputer system "Raijin" installed at Australian National University



Flooding in Australia

Supporting High-Quality, High-Productivity Greenhouse Horticulture with "Akisai"

The percent of Japan's population engaged in agriculture is both declining (comprises about 2% of the total) and aging (average age greater than 65). Boosting the industry with increases in agricultural productivity, therefore, is an urgent matter.

In the Miyagi Prefecture town of Yamamoto, where greenhouse-based production of tomatoes and strawberries is a thriving industry, producers were in need of a system capable of finely controlling greenhouse temperatures, humidity, sunlight, and other growing conditions to improve supply stability and production efficiency.

In response to that need, Fujitsu began offering greenhouse horticulture service as a new solution for "Akisai" food and agriculture cloud platform, in October 2012. This service, by measuring and accumulating greenhouse environmental data in a cloud, enables the use of this data for controlling greenhouse environmental conditions.

This system employs the new Ubiquitous Environmental Control System (UECS)^{*1} information standard for plant cultivation. UECS enables the use of a smartphone and other devices to remotely manipulate devices and equipment for controlling temperature, levels of sunlight, and other environmental conditions. "Akisai" saves labor and promotes high-quality, low-cost production activity that is also stable.

Through ICT, Fujitsu aims to continue helping to bring about a plentiful future for food.

^{*1} Ubiquitous Environmental Control System (UECS):

Japan's primary communications standard for greenhouse cultivation. Compared to conventional centralized management approaches, UECS excels in terms of low implementation cost, ease of installation, and low maintenance.



Greenhouses in Yamamoto Town, Miyagi Prefecture



Remote data monitoring and facility environment control possible with a tablet PC and other devices

Sustainable Urban Development Using Big Data (Singapore)

As of 2012, 52% of the world's population lives in cities. With this figure expected to rise to 60% by 2030, there are concerns that such rapid urbanization will only exacerbate traffic congestion, environmental pollution, and other urban problems. Creating sustainable cities, therefore, is an issue with global proportions.

In March 2013, Fujitsu entered into discussions with Singapore's Agency for Science, Technology and Research on the establishment of a Center of Excellence for creating urban development solutions.

In providing Fujitsu's computer simulation technology and expertise in applying big data, our aim is to create solutions for managing transportation and energy networks, building greener urban spaces, minimizing disaster damage, creating new business, and meeting other needs of urban environments.

Looking to the future, Fujitsu intends to continue contributing to sustainable regional development in Asia and other parts of the world, as well.



View of Singapore



Singapore's Agency for Science,
Technology and Research

Rising to the Challenge of Creating a Community Where Everyone in Need of Nursing Care Can Live with a Sense of Security

In Japan, which leads the world in population aging, seniors^{*2} now comprise 24% of the population and are projected to make up 32% by 2030. Visiting care and visiting nursing care services play important roles in providing health care in rural communities, where hospitals are lacking or access to them is impractical. Care providers and nurses, however, can visit no more than about 50 patients a day, and are, therefore, significantly overmatched when it comes to meeting patient needs.

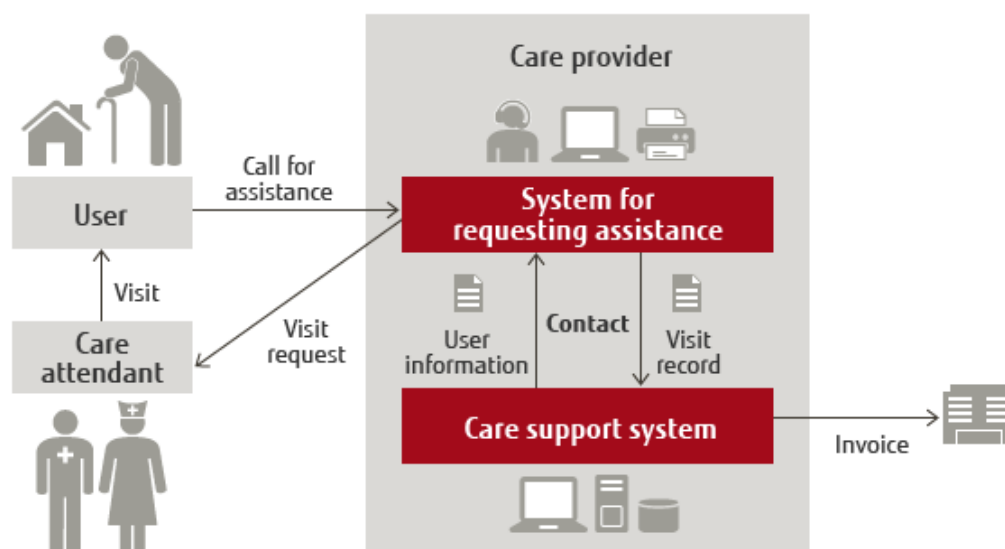
Fujitsu, therefore, joined with Kouseikai, a provider of medical services in Yao City, Osaka Prefecture, to develop a visiting nursing care system that, by linking a care support system and system for requesting assistance, speeds the acquisition of a patient's current and past medical data, selection of care providers, designation of the route to the patient's location, and issuance of care instructions. This system became available in December 2012 and, since then, has not only increased the number of patient visits per day by 240% but also facilitated the ability to provide patients with high-quality services and a sense of security.

Moving ahead, Fujitsu will continue working to improve quality of life by applying this system to preventive medicine to extend possibilities for people to continue living in their homes as long as possible.

*2 Seniors:

People age 65 or older.

Visiting Care/Nursing Care System



Creating a Personal Health Record System to Make Preventive Medicine a Reality (Finland)

Preventive medicine that manages daily-life practices has become the focus of attention as an approach for preventing lifestyle-related diseases and heading off increases in future medical costs.

In advanced countries, which lead the world in population aging, preventive medicine for managing daily living habits is drawing attention as a way to prevent lifestyle-related diseases and rise in medical costs.

In Finland, the Taltioni Cooperative was considering possibilities for building a Personal Health Record (PHR) system that would consolidate individuals' health and medical information from various medical and service institutions, and make preventive medicine and effective follow-up care a reality.

Fujitsu undertook a project in which we would develop and operate the Taltioni service, which would allow individuals to manage their health and medical data online. We built a highly secure platform, and made the service available beginning in January 2013. As a result, ordinary people can now use a tablet PC and other devices for daily entry and management of health condition, diet, exercise, and other data indispensable for health maintenance. Also, this system is designed to link it to hospital medical data to enable comprehensive health management covering prevention, as well as treatment and follow-up care.

Moving forward, Fujitsu aims to continue with its efforts to apply ICT for the improvement of medical and health services.



Image of medical institution using a PHR system



Taltioni service screen

Reducing Electricity Usage to Address Environmental Change

Urban areas now account for two thirds of all of the energy used in the world and are a major source of greenhouse gases. Japan, however, reducing its electricity consumption in response not only to those circumstances but also to electricity shortages and resulting higher rates following the Great East Japan Earthquake.

In response, Fujitsu has developed an energy management system (EMS) service called, Enetune. This cloud-based service provides integrative and cross-sectional visual representations of data on electricity consumption. Available since June 2012, Enetune enables the centralized management of energy data for all of a company's business locations, including leased or rented buildings and retail locations.

In a related development, a consortium of 15 companies led by Fujitsu was chosen in April 2012 as a BEMS aggregator^{*1} under a Ministry of Economy, Trade and Industry subsidy program for promoting the introduction of energy management systems. That means it is now easier for electricity users with less than 500kW of demand to introduce an EMS.

Fujitsu intends to continue with such efforts moving forward to make cities more efficient users of electricity and other energy, and contribute to the realization of smart cities.

*1 BEMS aggregator:

Manager/operator of a Building and Energy Management System. Promotes the introduction of cloud-based energy management systems.



City in need of smart-city solutions



Centralized management of multiple business site with Enetune

Using an Artificial Brain to Contribute to More Humane Working and Living Conditions

Fujitsu believes that the use of artificial intelligence will support thinking and decision-making, accelerate the creation of new knowledge, and holds the key to working and living in more humane ways.

Therefore, as a part of our research efforts along these lines, Fujitsu Laboratories joined the National Institute of Informatics' artificial brain project, "Can a Robot Pass the University of Tokyo Entrance Exam", in 2012. As a math team member, we are working to develop a program that uses natural-language processing and computer algebra technologies to solve math problems automatically.

Progress in this research will contribute to efforts to develop an artificial-brain robot that can understand imprecise human language, respond to various problems, and ultimately provide humans with assistance that makes daily life safer, more convenient and more secure.

Through efforts such as this, Fujitsu aims to use ICT to improve the ways in which we work and live, and open the door to major expansions of human capabilities and potential.



Mathematics team members for the "Can a Robot Pass the University of Tokyo Entrance Exam"

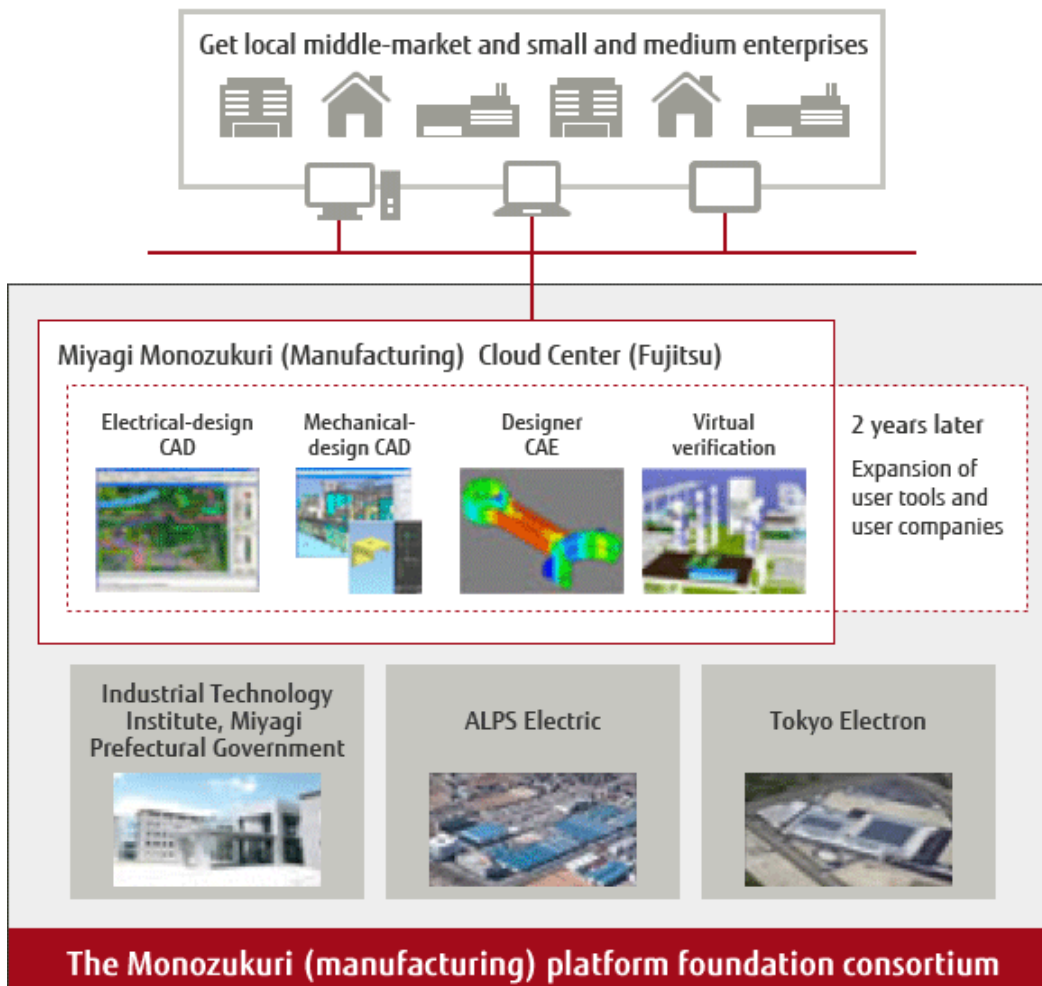
Using the Cloud to Promote Convenience and Business Continuity for Monozukuri (Manufacturing)

In the wake of the Great East Japan Earthquake, companies are paying much greater attention to Business Continuity Planning (BCP), specifically with natural disasters in mind. But even as large companies move forward with BCP development, the small and medium-size enterprises that make up 99.7% of all companies in Japan are finding the process fraught with hurdles. This is particularly true for manufacturing companies, where high investments in capital have been the issue to overcome.

Fujitsu, therefore, joined with ALPS Electric Co., Ltd., Tokyo Electron Limited, and the Miyagi Prefectural Government's Industrial Technology Institute to undertake a pilot project for combining IT and Monozukuri (manufacturing), beginning in March 2012. Together, the project participants built a public cloud, where users can access high-performance computers, 3-D and other CAD software, various types of simulation software, and other advanced design tools with a personal computer and an Internet connection. Measurements of actual usage taken by the product designers showed that the 3-D CAD and other software offerings could be used with no significant problems via an Internet connection.

Cloud environments not only hold down ICT adoption expenses; they also provide places for systems and data to safely reside. When a natural disaster strikes, therefore, the fact that a cloud environment has been used contributes to the rapid resumption of product development processes and manufacturing operations. Going forward, the system discussed above will be used to help enhance the robustness of small and medium enterprises throughout Japan.

Pilot Project for Promoting the Advancement of Monozukuri (Manufacturing) at Small and Medium Enterprises in Miyagi Prefecture



Middle-market and small and medium enterprises can access the Miyagi Monozukuri (Manufacturing) Cloud Center via the Internet and use CAD and other software. Since access is possible with even a laptop or tablet (Windows), CAD and other software can be used even in a meeting or at a remote location.



Leveraging ICT to contribute to a society that supports the elderly on the frontline of home healthcare and nursing.

With the number of people aged 65 and over now comprising 24% of its population, Japan is becoming a "super aging society." Total social welfare benefit cost to care for the elderly amounted to 35 trillion yen in 2012, and this figure is steadily increasing each year. Japan must support its elderly population amid limited medical resources, and it is expected that collaboration between existing hospital-based medical care, and home healthcare and nursing, will be enhanced as a national effort.

Through the experience Fujitsu gained over the past two years in using ICT in senior care on the front lines of home healthcare and in areas stricken by the Great East Japan Earthquake, we have developed a new cloud service named "Fujitsu Intelligent Society Solution Senior Care Cloud Oushin Sensei" in collaboration with Shinsuke Muto, president of You Home Clinic, Tetsuyu Institute Medical Corporation, that comprehensively supports the health and lifestyles of senior citizens through home healthcare and nursing services.

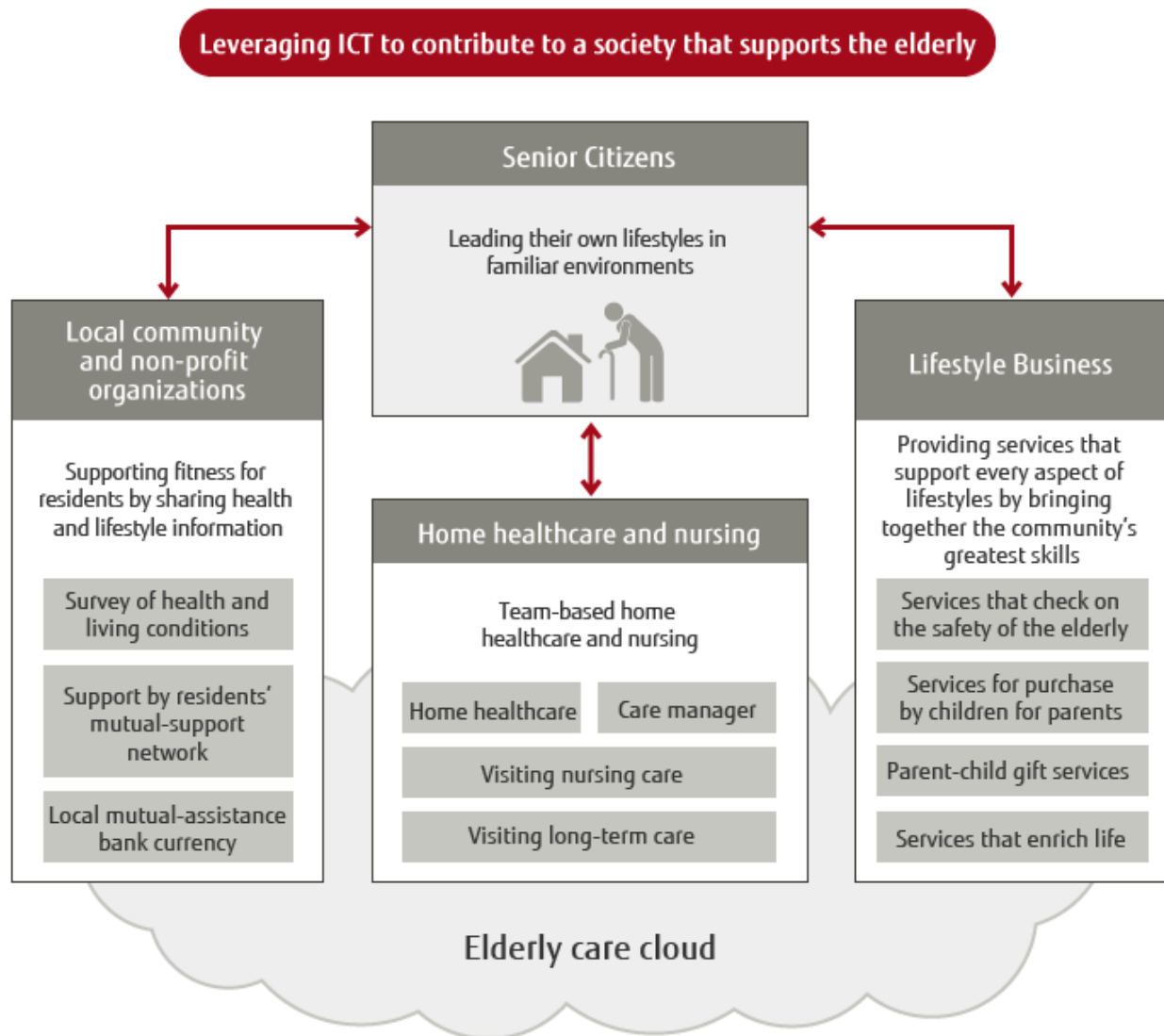
Launched in January 2013, this service has facilitated both role-sharing and information coordination for doctors and staff members and maximized the time that doctors spend together with patients. It enables the improvement of the quality of home healthcare services and enhance of teamwork in supporting the elderly by linking information collected by home healthcare and nursing staff.

Through this service, Fujitsu aims to realize a society that supports the elderly by improving the quality of home healthcare services, while reducing the burden on caregivers, and allowing the elderly to safely live in familiar environments.



Sharing of users' vital information in a cloud

Concept map of the Elderly Care Cloud



The Power to Provide Equal Opportunities to All People

Key Examples from FY 2012

Building A Cloud-Computing-Based Financial System for an Emerging Nation (Myanmar)

In advance of the fast-approaching economic integration of ASEAN nations scheduled for 2015, financial system modernization is a high priority for Myanmar. Until now, most aspects of the Central Bank of Myanmar's operations were being performed through tedious manual processes. The rapid rise in work volume and need for security measures expected to accompany the country's economic development, therefore, had become urgent concerns.

Daiwa Institute of Research Ltd., KDDI Corporation and Fujitsu Limited collaborated to build a cloud-computing-based financial system - Myanmar's first - for the Central Bank of Myanmar in December 2012. In addition to significantly improving the bank's operational efficiency, the new financial system incorporates the high security levels required by government financial institutions.

Through this computing environment, we and our partners are helping the Central Bank of Myanmar to not only smoothly issue and manage currency with speedy, streamlined action but also stably implement monetary policy.

Going forward, Fujitsu will continue to contribute to the sustainable development of Myanmar and other Asian countries.



Secure printing system using the Fujitsu PalmSecure palm vein authentication technology at the Central Bank of Myanmar



Inside the office (Image)

Joint Development of an Electronic Water Trading Management System for more Effective Water Resource Usage (Australia)

With precipitation differing considerably depending on region and year, water management is an ongoing concern in Australia, where water rights have been traded since the 1980s as a way to increase the efficiency of water usage.

In 2007, the State of Victoria's Department of Sustainability and Environment moved to simplify the water rights trade by unbundling traditional entitlements of water rights into three categories (water shares, water-use licenses, and delivery shares) and trading these rights separately. It also integrated five water registers that had been managed independently of one another.

Fujitsu developed the Victorian Water Register, an electronic water trading management system capable of executing and managing transactions involving all of Victoria's water entitlement records and water resources. Since the beginning of the system's operation, in July 2007, the Department of Sustainability and Environment has been using this system to manage water transaction price data, information on the holders of the various classes of rights, and intra- and interstate water market operation in Victoria. The Victorian Water Register has made efficient management of scarce water resources a reality, added a measure of stability to people's daily lives, and contributed to the development of agriculture and industry.



Inflows to rivers are declining due to imbalances in precipitation location and volume.

Fujitsu Group's Universal Design (UD)

The Fujitsu Group develops and provides products and services that facilitate greater social participation by being easy for everyone to use, irrespective of gender, age, and disabilities; ICT inexperience; or educational opportunities.

We use customer and third-party feedback gleaned from interviews, questionnaires, and user tests to determine whether we have fully satisfied users' essential demands. We strive to offer ICT with better usability for a wider user base.

Supporting Healthy Lives for Seniors with the Raku-Raku Smartphone

As information technology becomes a greater part of daily life across the globe, and creates various forms of value, the "digital divide," or information gap based on region, income, age, and other factors, has emerged as an important social issue. To help alleviate the age-based digital divide, in particular, Fujitsu is applying the know-how it has developed addressing Japan's aging society to the development of products and services that make daily life easier and more convenient for seniors throughout the world.

One such product, the Raku-Raku Smartphone, was released in Japan in August 2012. Using many of the functions offered in previous models of the Raku-Raku Phone series, this Raku-Raku Smartphone was designed with ease of use for seniors in mind. Linked to the "Karada Life" health management support service^{*}, which records activity via a pedometer, blood pressure, and other data, the Raku-Raku Smartphone offers a wealth of functions that help individual seniors pursue full and healthy lives.

At the global level, Fujitsu has launched the "STYLISTIC S01" smartphone in France. This handset is offered, together with services, one of which is designed to support communication among seniors, via a dedicated user community of their peers.

Going forward, Fujitsu is committed to providing society with value shaped by user experience.

* Karada Life:

This service is also available to users of conventional smartphones in Japan.



The "STYLISTIC S01" smartphone for seniors



"Karada Life" screen shots (for services offered in Japan)

Advanced Development Helping the Disabled Communicate

Fujitsu is working to enable people with disabilities to exercise their abilities and participate in society. We do this through advanced technology development, and the inclusion of employees with disabilities in development teams.

For example, to help smooth communication for the hearing impaired, who can experience communication difficulties in daily conversation, meetings and on other occasions, we have developed the "Shoku-on-ki," a device that changes sounds into vibrations, the "Hoko Dori (Direction Chaser)," which provides a visual indication of the direction from which a sound emanated, and "word spotting" technology that converts sounds and voices into textual representations on a display panel.

People with visual impairments also face communication difficulties, for example, from not knowing whether someone is present. But they also face problems caused by the presence of small items in their immediate surroundings, whether indoors or out. To address these needs, Fujitsu is developing pedestrian-assistance system technology that can be used with smartphones. This technology provides the user with voiced direction and distance information for their destination. Location information can be pinpointed within an accuracy of about 30cm in assisting visually impaired people with movement and communication even indoors.

Fujitsu will continue to pursue development aimed at creating products and services that help more and more people to participate in society.



Hoko Dori device shows the direction from which a sound came



System for assisting visually impaired pedestrians

Major Awards Received in FY 2012

- **GOOD DESIGN AWARD (Japan)**

- NTT docomo F-12D Raku-Raku Smartphone
- LIFEBOOK UH75/H
- TeamPoS7000 Model A100 / A200
- FACT-V XCD ATM Operation for Retail Outlets
- Patio Printer
- Radiation Monitoring Data Integration System
- docomo Semi Gakushu Navi (Study Navigator) app

- **KIDS DESIGN AWARD (Japan)**

- Project for Reviving Ties through the Restoration of Tsunami Damaged Photos
- Project for Sharing the Courage and Energy to Live by Sustainably Deepening Ties to Disaster-Stricken Areas
- Digital Teaching Materials for the "Minna de Manabiau Jugyo Kurasu (Learning Together with Everyone Class)"
- Our Happy Planet Future School with FUJITSU VISION DESIGN

- **Machine Industry Award**

- PRIMEHPC FX10 Supercomputer

- **universal design award (Germany)**

- F-12D Raku-Raku Smartphone

- **red dot design award (Germany)**

- PRIMERGY TX150/200/300
- PRIMERGY TX120 S3
- ESPRIMO Q
- LT/LU series of thin air conditioners for overseas markets

- **iF design award (Germany)**

- Windows Phone IS12T
- LT/LU series of thin air conditioners for overseas markets

The Power to Support Safe and Secure Living

Key Examples from FY 2012

Development of an Integrated Radiation Monitoring Data System for Supporting Safety and Security in Daily Life

The dispersion of radioactive substances seriously impacts daily lives, but the invisibility of radiation makes it difficult to accurately grasp these impacts and this results in specific communities suffering unduly from speculation and rumors.

The shared Radiation Monitoring System inaugurated by the Nuclear Regulation Authority is operated by a Fujitsu datacenter that is robust against natural disasters and equipped with advanced security functions. "Big data" in various formats is collected from approximately 3,900 municipalities and other locations throughout Japan and rapidly and accurately converted and accumulated at the datacenter. Information based on that data is provided from a central location to multiple types of devices, including PCs and smartphones, on easily comprehensible screens, so that anyone can readily check the dose rate for a particular location in real time.

To support safety and security in daily life, Fujitsu will continue to provide various types of information, based on "big data" analysis, in formats that are easily understandable.



Radiation Monitoring Information screen



Representation of monitoring coverage

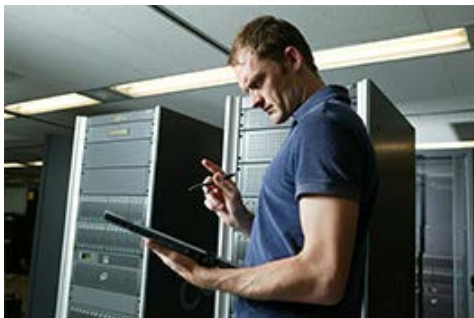
Provision of Remote Backup Services that Protect Businesses against Disasters

The business continuity plans (BCP) companies develop to protect themselves from increasingly severe natural disasters and unpredictable emergencies require robust data backup environments and schemes for achieving rapid resumption of business activities.

Since January 2013, Itochu Enex Co., Ltd. has been using Fujitsu's remote backup and optimization solutions. Fujitsu's 66 datacenters in Japan offer the highest levels of performance available in the country.

Itochu Enex has chosen to use our Kagoshima Datacenter, which is in a different location from its own servers, for its daily data backups. In doing so, Itochu Enex has realized lower telecommunications costs and shorter backup times, and strengthened itself against disasters by making it possible to immediately recover its most critical data and rapidly restore business operations.

Going forward, Fujitsu, by preparing for disasters and other unpredictable events through its remote backup services, will continue to enhance the initiatives it takes to enable customers to more reliably and rapidly restore business operations.



Remote backup services protecting customers' businesses



Fujitsu datacenter (Fujitsu Kagoshima Infortnet Limited)

Comprehensive Security and Privacy Protection for the Stability of a Cyber Society

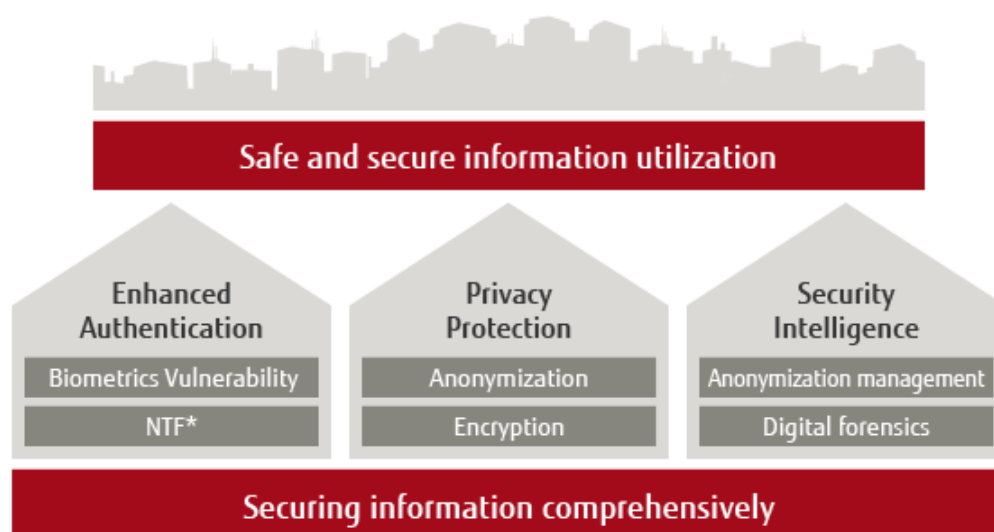
The Internet society now boasts a population of some 2.4 billion. And with 400 million computer viruses being created every year, it is very much like a new ecosystem. Amid the ongoing globalization of businesses, the Fujitsu Group believes multilayered cyber security measures, including preventive ones, are indispensable.

In response to increasing cyber risks, Fujitsu established the Fujitsu Cloud CERT. As Japan's first Computer Emergency Response Team specifically for the cloud, this organization monitors cloud security 24 hours a day, 365 days a year.

Fujitsu, however, is also focusing on security intelligence based on prediction, and offering systems that create visual representations of information on a company's internal systems, identify weaknesses, and raise alarms in real time. Together with the enhancement of authentication platforms and protection of privacy, we are promoting the safe and secure use and application of information from three perspectives.

Through the application of cutting-edge technology and know-how, the Fujitsu Group is committed to the ongoing support of a stable cyber society, which continues to expand in complex ways.

An ICT Environment That Is Safe and Secure from Three Perspectives



*Near Field Communication

For details of our yearly activities for information security, visit [Fujitsu Group Information Security Report](#).

Helping to Secure a Medical Insurance System with Palm Vein Authentication (Turkey)

With medical services among the most modern in the Arab world, Turkey sees a considerable number of people coming from neighboring countries for medical care. However, with one out of five medical insurance claimants requesting benefits under false circumstances, measures for rooting out insurance fraud had become a major concern.

The Fujitsu Group, using PalmSecure, a biometric authentication system that uses palm vein pattern recognition technology, built a system for authenticating patient identities. Field tests of this system in two hospitals contributed significantly to efforts to stop fraudulent insurance claims and made previously burdensome reception work more efficient. Based on these results, Turkey's Social Security Institution is planning to implement this patient identity authentication system in hospitals and pharmacies throughout the country.

The Fujitsu Group is pressing on with efforts to use PalmSecure technology to make daily life safer and more secure in locations throughout the world.



Field testing palm vein authentication in Turkey

Contributing to the Prevention and Early Detection of Mental Disease through "e-shindan@kokoro no kenko"

It is said that throughout the world 350 million people suffer from mental disease. In Japan, the number of young people who are afflicted with depression in the prime of their careers is rising. Given that the number of people in their 30s who are suffering from mental disease is growing at major companies, as well, the importance of mental health care within companies is increasing.

Fujitsu, working in collaboration with Professor Norito Kawakami of the University of Tokyo's School of Integrated Health Sciences, has developed the "@kokoro no kenko series," a system for the prevention and early detection of mental disease. This system is used by over one million people every year. It lets employees perform simple mental health checks using personal computers at work. Because it also allows industrial physicians to determine the condition of individual employees, it plays a useful role in the taking of steps to prevent mental disease and improve workplace environments.

Companies that have adopted this system have seen a reduction in health risks, and declines in both the number of employees taking days off and the number days taken off because of mental health problems. The newest version of the system, released in June 2012, includes functions for evaluating degrees of work engagement^{*1} and workplace social capital for individual employees.

By integrating workplace mental health measures and organizational invigoration initiatives, Fujitsu is helping to create vibrant workplaces.

^{*1} Work engagement:

The degree to which an individual has a sense of fulfillment, passion, pride, etc. toward his/her job.

Development of Warning System for Reducing Flood Damage (U.K.)

The U.K. has suffered repeatedly from flood damage due to increased rainfall brought on by climate change in recent years. In England and Wales, five million people, in over two million households, now live in flood risk areas.

At the Environment Agency, which is responsible for predicting and warning of the risk of flooding from rivers and seas in these areas, legacy systems had made it difficult to issue timely, highly accurate flood warnings. The need to share information took on even greater importance with the catastrophic damage caused by flooding in 2007.

The Floodline Warnings Direct application developed and managed by Fujitsu issues flood alerts to local residents using their preferred communication methods - telephone, SMS, or other communication channel. With over 330,000 registered users, the system promotes swift evacuation and reduces property losses by communicating flood alerts to users - 95% of whom are contacted within 13 minutes after an alert is issued - so they can take appropriate action.

The U.K. had a record amount of rainfall in 2012. Fujitsu, through the provision of rapid, accurate alerts, will continue to help the U.K. reduce losses due to flooding.



Flood damage



Floodline Warnings Direct computer screen

Using Phone Scam Detection Technology to Protect People from Remittance-solicitation Fraud

With its population continuing to age, Japan experienced more than 6,400 cases of remittance-solicitation fraud, causing losses of around 16.1 billion yen in 2012. Reducing damages and preventing these crimes, which target mainly elderly citizens living alone, are matters of great urgency.

Fujitsu has developed a system that applies a suspicious-call detection technology that uses voice tone, intonation, fraud-specific keywords, and other data to detect suspicious calls and give call recipients a synthesized-voice warning of the threat at hand. In the world's first field trial of such a system, which began in Okayama Prefecture in August 2012, fraudulent calls were detected with an accuracy of over 90%. The system not only issues warnings to call recipients but also sends email notifications to family members, police, banks, and Fujitsu.

Fujitsu is working to further improve accuracy in field trials of this system, and to make society safer with security solutions via ICT.



Device for detecting remittance-solicitation phone scams (prototype)



Detection result screens (Left: Low fraud risk; Right: High fraud risk)

Collecting Patient Health Data and Facilitating Information-Sharing between Patients and Doctors

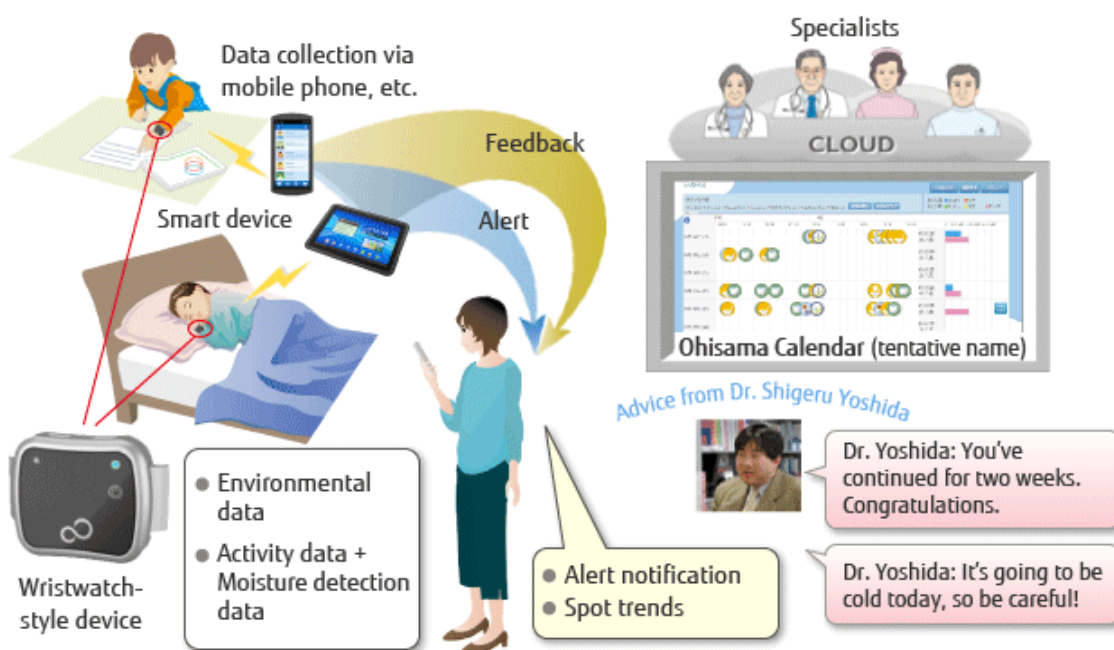
With medical costs growing year-by-year, Japan has a growing social need for preventive medicine and early treatment that detect slight signs of illness to prevent illness from developing or becoming severe.

Fujitsu and the Nagoya University Innovative Research Center for Preventive Medical Engineering have begun joint research on collecting and visualizing health information using a wristwatch style health-monitoring device and system to collect, analyze and display data, with an eye toward building a seamless care system covering health maintenance to disease treatment based on collected and visualized individual health/medical information.

This research is using nocturnal enuresis (known as bed-wetting) as a case study. Health-related data (activities, body moisture and environmental data) are automatically collected by a wristwatch style device and daily activities including bed-wetting incidences recorded by families are stored in, and viewable from the cloud. Through this system, the research aims to make it easier to understand a patient's daily activities and status, and to facilitate information sharing between patients and their doctors.

Fujitsu is committed to working with the Innovative Research Center for Preventive Medical Engineering to achieve its goal to enable early treatment and preventive medicine that is optimized for the individual by revealing even minor changes in health status instantaneously.

Image of future service



Environmental Management at the Fujitsu Group

The Fujitsu Group is well aware of its mission as a global ICT organization. We are dedicated to helping to realize a sustainable society together with our customers and society as we seek more ways to reduce our impact on the environment.

Leveraging the power of ICT to achieve sustainable growth and help to solve social and environmental issues

Since its inception in 1935, the Fujitsu Group has advanced consideration for the environment from a medium-to-long term perspective based on the principle of "operating in harmony with nature." Among the Corporate Values we have put forth in the FUJITSU Way, we state that we will strive to "protect the environment and contribute to society." Contributing to global sustainability is one of the Fujitsu Group's social responsibilities, and a reason for its existence.

ICT makes it possible to use resources and energy more efficiently and it can also play an important role in solving complex social and environmental issues. By expanding its business through ICT-based innovation and solutions that solve customers' problems, the Fujitsu Group can contribute to the realization of a prosperous, sustainable society.

Advancing efforts to lower the Fujitsu Group's own environmental burden is also important. Minimizing the amounts of energy and resources used in the life cycles of products and services will make us more competitive. Diligently working to achieve energy savings in our business activities will also result in lower costs. Doing these things is critical for securing business advantage for the Fujitsu Group.

It is based on these ideas that the Fujitsu Group, by increasing the deployment of ICT throughout society, will expand its contributions in solving environmental challenges together with customers and society. We will also do everything reasonably possible to lower the environmental burden of our business activities and will formulate environmental action plans laying out specific targets toward that end.

Principal FY 2012 Environmental Management Results

	Green ICT Contributions to CO ₂ Emission Reductions	Total GHG Emissions
FY 2012 targets	15 million tons or more	6% reduction compared with FY 1990
FY 2012 results	15.61 million tons (Total for FY 2009-2012)	1.01 million tons (24.4% reduction compared with FY 1990)

Evolution fo the Fujitsu Group Environmental Action Plan

Stages I – V

(FY1995 to 2009)

Focus on the Fujitsu Group's own consideration for the environment

Stage VI

(FY 2010 to 2012)

Focus on environmental management along three axes - Contributions to customers and society as a whole, redoubling of efforts to lower the Fujitsu Group's own environmental burden, and conservation of biodiversity

Stage VII

(FY 2013 to 2015)

Focus on expanding contributions to customers and society as a whole



- [Fujitsu Group Environmental Action Plan \(Stage VII\)](#)

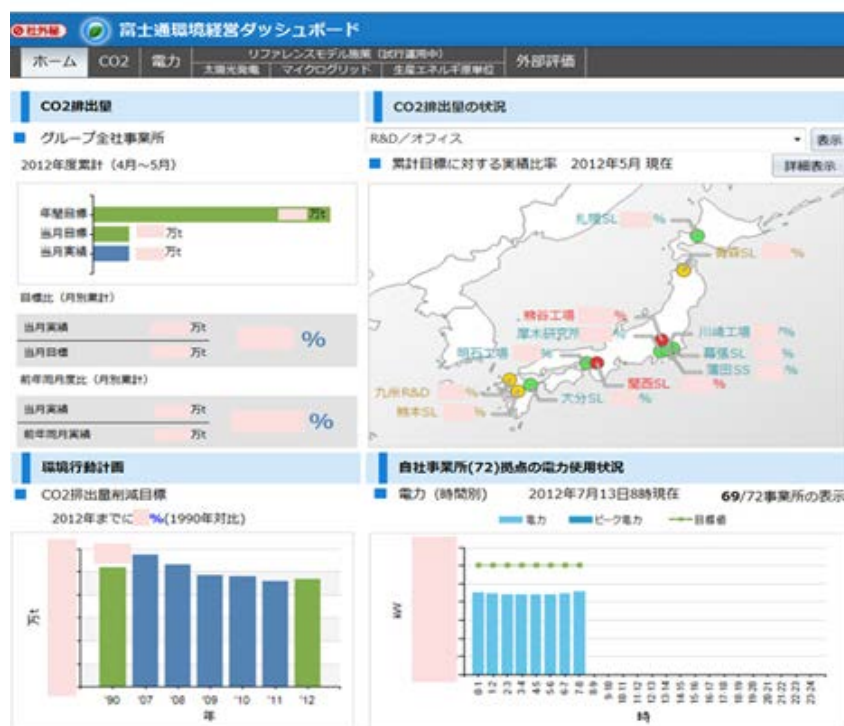
Reinforcing Environmental Management by Utilizing ICT

In order to make our environmental management even smarter, the Fujitsu Group has constructed, and is using, the Environmental Management Dashboard - a tool that gathers and analyzes various environmental data in real time, and presents it on a central information screen.

The dashboard can show data ranging from the entire Fujitsu Group to individual business sites, departments, buildings and floors. Users can access data for the types and amounts of energy used, total GHG emissions, GHG emissions per employee or unit of floor area, year-on-year comparisons broken down by month, and various other information on a real-time basis in visual representations. Examples of other capabilities are monthly performance reports in relation to targets and an alert function. Information on the dashboard provides executives, divisional managers, on-site managers, and others with information suited to their roles and objectives. The dashboard supports decision-making at all levels, from upper management to individual employees taking action to pursue their own autonomous initiatives to protect the environment.

The Fujitsu Group is providing knowledge gained from its own use of the Environmental Management Dashboard to customers as an environmental reference model that they are incorporating into their own environmental management.

A sample Environmental Management Dashboard screen display



- [Providing Environmental Solutions](#)

Fujitsu Group Environmental Policy

The Fujitsu Group has established the Fujitsu Group Environmental Policy based on the principles and guidelines set forth in the FUJITSU Way.

- [Fujitsu Group Environmental Policy](#)

Environmental Concept "Green Policy 21"

Green Policy 21 has been established to instill in all Fujitsu Group employees the ideas underlying the Group's environmental activities, and to promote the practice of these ideas in daily work.

- [Environmental Concept "Green Policy 21"](#)

Medium-Term Environmental Vision "Green Policy 2020"

The roles the Fujitsu Group should play and the directions it should follow in the years leading up to 2020 are laid out in the Group's Green Policy 2020 medium-term environmental vision. In working to achieve the three objectives set forth under Green Policy 2020 - Benefiting customers and society, pursuing internal reforms, and preserving biodiversity - we will create technologies and solutions, and collaborate with various actors while changing the Fujitsu Group itself into a low-carbon company to realize a low-carbon, prosperous society.

- [Medium-Term Environmental Vision "Green Policy 2020"](#)

The Green Policy Innovation Logo

The Fujitsu Group started its Green ICT project, called Green Policy Innovation, in December 2007. We began using the Green Policy Innovation Logo in November 2008 so that customers can easily identify products and services that are part of this project.

Only products that meet specific requirements may display this symbol. One category is "Green" products that meet our strict environmental criteria for recycling, energy conservation, environmentally responsible materials and other criteria. Another is "Super Green" products, which meet the highest levels of environmental criteria among all Fujitsu Group products. We also use this symbol for Environmental Solutions which can lower customers' CO2 emissions by at least 15%.



The Green Policy Innovation Logo

Environmental Emblem

This Environmental Emblem symbolizing the stance of the Fujitsu Group with respect to the environment was unveiled in November 1994. The emblem consists of the Earth, a pair of eyes, and an infinity symbol, which is used as part of the Fujitsu Logo. The meaning is that the Fujitsu Group will always conduct its business caring for the Earth.

The Environmental Emblem can be found, among other places, in Fujitsu Group Sustainability Reports and in association with Group environmental and social contribution activities.



We care for the Earth.

Environmental Emblem

First ICT Services Company to Garner "Eco-First" Credentials

In September 2010, Fujitsu became the first ICT services company to be certified under Japan's Ministry of the Environment's "Eco-First Program." Under the program, industry-leading companies pledge to fulfill their environmental commitments to the Minister of the Environment in areas such as countering climate change and conserving biodiversity as a way to further promote their environmental protection initiatives.



First ICT Services Company to Receive "Eco-First" Credentials

Looking Back on FY 2012

The Fujitsu Group practices environmental management along two dimensions, i.e. making environmental contributions to customers and society, and pursuing reductions in our own environmental impact.

For the Fujitsu Group Environmental Protection Program (Stage VI), which covered the three years beginning with FY 2010, we achieved all of our targets, including four we revised upward. In two examples of our achievements as of the end of FY 2012, we contributed to a cumulative 15.61 million tons of CO2 emission reductions by customers and society from the beginning of FY 2009, and reduced total GHG emissions by 24.4% compared to FY 1990.

In FY 2012, we began to incubate an expanded range of environmentally focused business services. In one example, we began offering services based on our Environmental Management Dashboard, which visually represents, and forecasts, energy use volumes. We also began providing a cloud service usage environment to organizations working to conserve biodiversity, and engaged in other forms of cooperation with stakeholders and society to further promote protection of the global environment.

From FY 2013, we have embarked on efforts to expand contributions to the environment by doing even more to promote the use and application of ICT in society as a whole in ways consistent with our recently formulated Fujitsu Group Environmental Action Plan (Stage VII). Environmental initiatives cannot be successfully undertaken by a single company working in isolation. Through an even greater level of dialogue with our stakeholders, we will strive to promote the use of ICT for green innovation.



Corporate Executive Advisor (Environmental Strategy) Atsuhisa Takahashi	Head of Unit, Corporate Environmental Strategy Unit Minoru Takeno
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Targets and Results for the Fujitsu Group Environmental Protection Program (Stage VI)

Action Plan and Targets for the Period from FY 2010 through 2012

In April 2010, we created the Fujitsu Group Environmental Protection Program (Stage VI) to run from FY 2010 to the fiscal year ending March 31, 2013 (FY 2012).

The program is based on the three targets established in Green Policy 2020 and defines six key areas: strengthening advanced green ICT R&D, improving the environmental value of products and services and strengthening the development and provision of green ICT, strengthening efforts to reduce the environmental burden of the Group itself, strengthening our foundation for environmental management, promoting activities that make environmental contributions to society, and promoting activities that conserve biodiversity. Moreover, we have established a further 18 items to serve as specific program targets.

All Fujitsu Group Environmental Protection Program (Stage VI) Targets Achieved

In FY 2012, the final year of Fujitsu Group Environmental Protection Program (Stage VI), we achieved all of the fiscal year targets, thereby, also achieving all of the targets for the three years covered by the program. Among those were targets revised upward for FY 2011; namely, advanced green ICT R&D, environmental efficiency factors, renewable energy, and CO2 reduction in distribution and transportation.

Benefitting customers and society

Strengthening advanced green ICT R&D

Category	Performance (FY 2010)	Performance (FY 2011)	Targets (FY 2012)	Performance (FY 2012)
Strengthening advanced green ICT R&D				
Develop technologies for next-generation datacenters and networking that will at least double overall efficiency of ICT products by the end of FY 2012.	1.3 times	1.5 times	Over 2 times	Over 2 times
By the end of FY 2012, more than 70% of all technology developed will be solutions for reducing burden on the environment.	58%	61%	70%	73%

Improving environmental value of products and services, and enhancing development and delivery of green ICT

Category	Performance (FY 2010)	Performance (FY 2011)	Targets (FY 2012)	Performance (FY 2012)
Develop and deliver green ICT to contribute to customers and society				
Provide green ICT that will reduce cumulative CO2 emissions by 15 million tons or more over the FY 2009-12 period.	5.60 million tons	9.98 million tons	15 million tons or more	15.61 million tons
Develop and provide eco-friendly products (Super Green products)				
With respect to newly developed green products in all departments, Super Green products that contribute to reduced environmental footprints through low energy and resource demands must comprise 30% by end of FY 2012.	17%	33%	30% or more	39%
Develop and provide eco-friendly products (environmental efficiency factors)				
With respect to newly developed green products in all departments, the environmental efficiency must be raised to 4.0 times FY 2008 value by end of FY 2012. *1	Raise to 3.2	Raise to 4.1	Raise to 4.0	Raise to 4.6
Promote product recycling				
Sustain 90% resource reuse rate of business ICT equipment globally at Fujitsu recycling centers.	93.3%	94.1%	Sustain 90%	94.3%
Develop and provide environmental solutions				
Promote development and provision of environmental solutions in all areas, including industry, transport, business, households, and energy conversion sectors.	Departmental and regional coverage rate: 78%	Departmental and regional coverage rate: 89%	Departmental and regional coverage rate: 100%	Departmental and regional coverage rate: 100%
Expand provision of environmental solutions in major regions, including Japan, Europe, the Americas, and Asia-Pacific.				

Pursuing internal reforms

Enhancing efforts to reduce the Fujitsu Group's environmental footprint

Category	Performance (FY 2010)	Performance (FY 2011)	Targets (FY 2012)	Performance (FY 2012)
Reduce greenhouse gas emissions				
Reduce total greenhouse gas emissions associated with manufacturing globally to 6% below FY 1990 levels by end of FY 2012 (CO2: 5% reduction, other greenhouse gases: 20% reduction).	11.7% reduction	18.2% reduction	6% reduction	24.4% reduction
Reduce greenhouse gas emissions (renewable energy)				
Increase use of renewable energy sources to 10 times FY 2007 levels by end of FY 2012.*1	4.8 times	11 times	10 times	11.9 times
Reduce CO2 in transport and distribution				
Reduce CO2 emissions from domestic transport to 15% below FY 2008 levels by end of FY 2012.*1	18% reduction	24% reduction	15% reduction	32% reduction
Promote business partners' greenhouse gas reduction				
Promote procurement from business partners that limit or reduce greenhouse gas emissions.	62.7%	98.4%	100%	100%
Factory improvements (chemicals)				
Reduce output of priority chemicals to 10% below FY 2007 levels by end of FY 2012.	48% reduction	60% reduction	10% reduction	62% reduction
Factory improvements (waste)				
Reduce waste generation to 20% below FY 2007 levels by end of FY 2012.	20.1% reduction	27% reduction	20% reduction	29.6% reduction
Maintain zero waste emissions at factories in Japan.	Status maintained	Status maintained	Status maintained	Status maintained
Office improvements				
Achieve four-star rating or better under the Green Office plan for every office by end of FY 2012.	Japan: Trials using new standard	Japan: 80%	Japan: 100%	Japan: 100%
	Internationally: Field survey (completed)	Internationally: completed draft evaluation standards	Internationally: Trial implementation	Internationally: Trial implementation

Strengthening environmental governance

Category	Performance (FY 2010)	Performance (FY 2011)	Targets (FY 2012)	Performance (FY 2012)
Continuously improve globally integrated environmental management systems				
Promote further ICT deployment for environmental management, build smart environmental management systems.	Trial implementation	Block application rate: 60%	Block application rate: 75%	Block application rate: 100%
To improve environmental performance, by end of FY 2012 we intend to apply a framework of assessments for the extent of target achievement and a compliance of 100% in regard to the Group's main domestic production companies.	Performance assessment procedures established	Trial implementation	Expand as far as domestic manufacturing group companies	Apply to all 23 covered business sites
Promote environmental management through communications with stakeholders				
Promote environmental communication at all levels to improve environmental management	Both internal and external information dissemination improved	Both internal and external information dissemination improved	Improved communication of environmental information	Both internal and external information dissemination improved

Promoting environmental contributions to society

Category	Performance (FY 2010)	Performance (FY 2011)	Targets (FY 2012)	Performance (FY 2012)
Further elevate the environmental awareness of employees through environmental and social contribution activities				
Construct the "Act-Local-System" for sharing information on social contribution activities by the end of FY 2010, and share information on environmental and social activities underway at business sites across the globe.	Network construction completed	Japan network operating. Overseas network operating	Japan network operating. Overseas network operating	Japan network operating. Overseas network operating
Continue environmental and social activities underway at business sites across the globe, and use the "Act-Local-System" to engage in activities that are more oriented toward local communities.	Japan: Implemented at all business sites	Japan: Implemented at all business sites	Japan: 1x/year	Japan: Implemented at all business sites
	Internationally: Implemented at 54% of business sites	Internationally: Implemented at 65% of business sites	Internationally: 1x/3 years	Internationally: Implemented at all business sites as of the end of FY 2012

Preserving biodiversity

Promoting efforts to preserve biodiversity

Category	Performance (FY 2010)	Performance (FY 2011)	Targets (FY 2012)	Performance (FY 2012)
Reduce impact of company's operations on biodiversity				
Develop numerical indicators to measure impact of operations on biodiversity and build system to expand contribution of ICT to reducing that impact.	Completion of numerical indicator development	4.6% reduction in level of impact (in main business areas) compared to FY 2009 as evaluated by BD integration index	3% reduction in level of impact (in main business areas) compared to FY 2009 as evaluated by BD integration index	9.6% reduction in level of impact (in main business areas) compared to FY 2009 as evaluated by BD integration index
Promote procurement from business partners that work to preserve biodiversity.	60.9%	99.2%	100%	100%
Contribute to community-building that conserves biodiversity				
Build case studies that contribute to biodiversity through ICT in all major offices by end of FY 2012.	Survey implementation	Pilot project based on survey results	Development at main business sites	Development at main business sites
Conduct biodiversity preservation/education programs in all offices by end of FY 2012.	Japan: Implemented at all business sites	Japan: Implemented at all business sites	Japan: Once a year	Japan: Implemented at all business sites
	Internationally: Implemented at 30% of business sites	Internationally: Implemented at 41% of business sites	Internationally: Once every three years	Internationally: Already implemented at all business sites as of the end of FY 2012

*1:
Target revised upward.

Fujitsu Group Environmental Action Plan (Stage VII)

Setting Up an Action Plan and Targets for the Period from April 2013 through March 2016

Fujitsu today announced the Fujitsu Group Environmental Action Plan, Stage VII, which sets new environmental goals for fiscal 2013 through fiscal 2015 (April 1, 2013 - March 31, 2016).

Under the plan, the Fujitsu Group seeks to expand its contribution to addressing environmental challenges for both customers and society by further promoting the deployment of ICT throughout society as a whole.

In taking a leadership role in actively pursuing our goals across its entire global value chain with customers, partners and suppliers, the Fujitsu Group strives to bring about a sustainable, prosperous society, which is at the heart of the company's corporate philosophy.

The Intention of Fujitsu

Our world faces many challenges relating to population growth. These include the security of supply of energy, other resources and food, climate change, the increasing frequency of natural disasters, and loss of biodiversity. These social and environmental issues are deeply interconnected, and they cannot be managed in isolation. Society expects businesses to proactively take actions to address these challenges.

Deploying information and communications technology (ICT) in an intelligent manner can improve the efficient use of energy and other natural resources and reduce greenhouse gas emissions. ICT can also assist society preparing for and responding to natural disasters. Fujitsu believes ICT has a major role to play in helping society address the world's environmental challenges. Beyond meeting today's demands, ICT has the power to connect people, enable sharing of knowledge and experience, and shape a safer, sustainable, and more prosperous tomorrow.

Through our business activities, Fujitsu will continue to respond to these social and environmental challenges, by increasing the deployment of ICT sustainability solutions throughout society and developing new innovative technologies. As a leading ICT company, we will continue working together with our stakeholders in the global value chain including our customers, partners and suppliers to shape a sustainable and prosperous society.

Target items

Our Society

Contribution to Society by ICT: Reduce Greenhouse Gas Emissions

- Reduce greenhouse gas emissions for our customer and society over 26million tons.*[1](#)

Contribution to Society by ICT: Increase Solutions

- Increase the deployment of sustainability solutions.

Design and Deliver Eco-efficient Products: Energy Efficiency

- Achieve top-level energy efficiency*[2](#) of more than 50% of the newly developed products.

Design and Deliver Eco-efficient Products: Resource Efficiency

- Increase resource efficiency of newly developed products by 20% compared to 2011.

Leading Edge R&D

- Develop innovative technologies that enable solutions and products to reduce the environmental load.

Corporate Citizenship: Social Challenges

- Support initiatives that address the complex social and environmental challenges, e.g. biodiversity conservation.

Corporate Citizenship: Social Activities

- With society, support our employees to volunteer social activities.

Our Business

Efficient Business Operations: Reduce Greenhouse Gas Emissions

- Reduce greenhouse gas emissions in our business facilities by 20 % compared to 1990.

Efficient Business Operations: Energy Intensity

- Improve energy intensity in our business facilities over 1% each year.

Efficient Business Operations: Data Centers

- Improve environmental performance of our major data centers.

Efficient Supply Chain: Logistics

- Reduce CO₂ emissions*3 per sales from logistics over 4% compared to 2011.

Efficient Supply Chain: Procurement

- Expand activities of reducing CO₂ emissions to all types of suppliers.

Efficient Use of Resources: Renewable Energy

- Increase generation capacity and procurement of renewable energy.

Efficient Use of Resources: Water

- Continue efforts for efficient use of water, e.g. water recycling and water saving.

Continuous targets*4

Reduced Environmental Impact: Chemicals

- Reduce chemical emissions to less than the average level of 2009-2011 (PRTR: 21t, VOC: 258t).

Reduced Environmental Impact: Waste

- Reduce the amount of waste to less than average level of 2007-2011 (amount of waste: 31,134t).
- Keep Zero Emission in factories in Japan.

Reduced Environmental Impact: Recycling

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

*1 26million 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.

*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 Reduce CO₂ emissions:

Calculate emissions of CO₂ equivalence from energy consumption

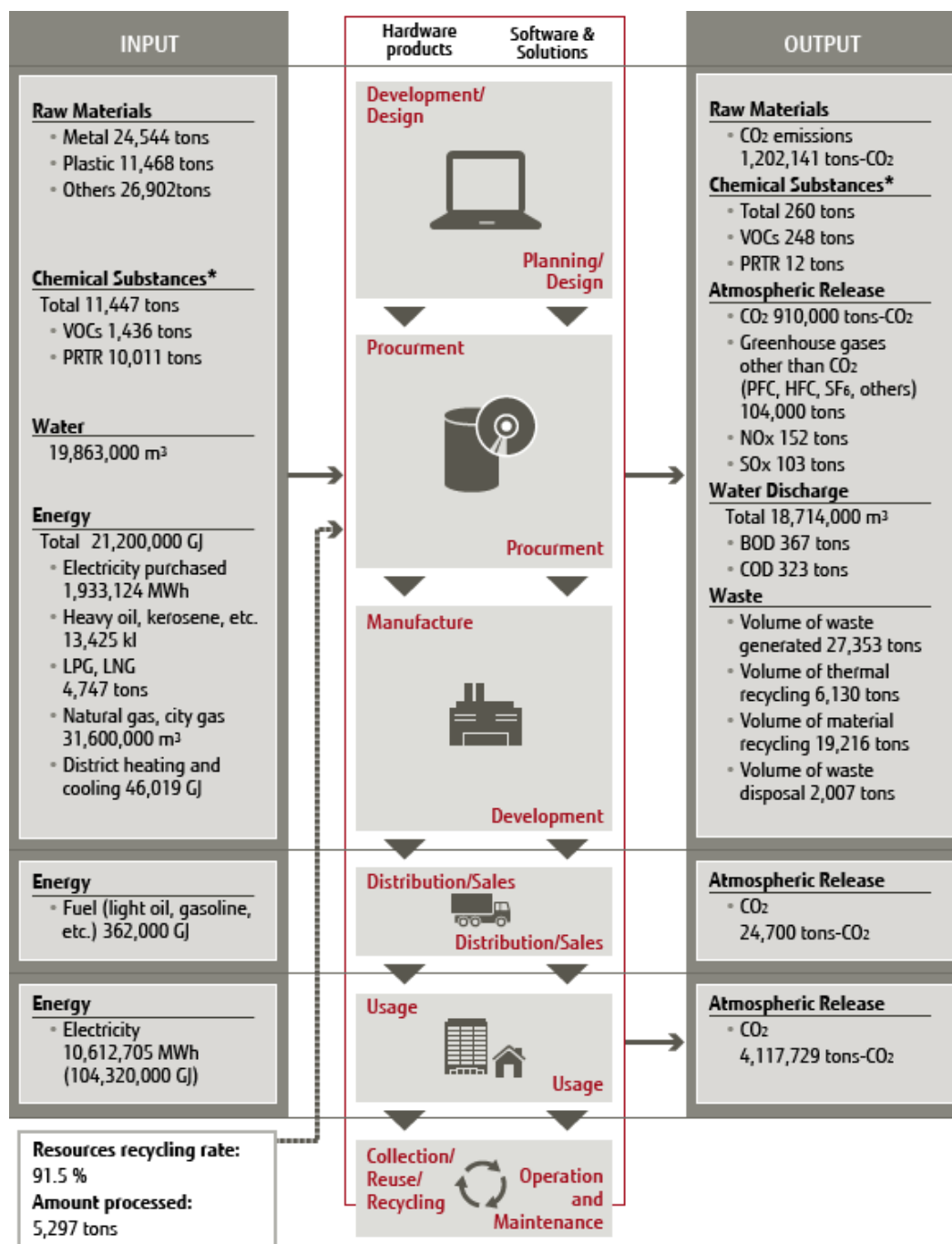
*4 Continuous targets:

Targets to be achieved through business activity because already achieved high level performance.

Operating Activities and Environmental Load (FY2012)

We promote environmentally friendly business activities through overall quantitative assessment of our environmental burden.

FY 2012 Performance



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

FY 2012 Environmental Accounting Results

To promote environmental management, the Fujitsu Group introduced environmental accounting in FY 1998. We evaluate the efficiency of our environmental protection activities by monitoring the required costs and benefits of these activities. Through this process, we have clarified issues and promoted sharing of the results.

Purpose of Introducing an Environmental Accounting System

- To clarify our corporate stance through disclosure of information to stakeholders
- To implement long-term, continuous environmental measures
- To raise the efficiency of investment in environmental protection measures
- To energize environmental protection activities

Basic Environmental Accounting Elements

- Applicable period
April 1, 2012 to March 31, 2013
- Accounting coverage
Fujitsu and its major consolidated subsidiaries worldwide [*1](#)
- Calculation basis for environmental protection costs
 - **Accounting method for depreciation and amortization:** Depreciation and amortization expenses for investments are included in expenses using straight line depreciation (with no residual value) based on a useful life of 5 years. The useful life of 5 years was chosen based on the average length of the actual period from the introduction of environmental facilities to the implementation of repairs and upgrades.
 - **Basis for recording composite costs:** In regard to composite costs in which environmental protection costs are coupled with other costs, the Fujitsu Group records only the portion corresponding to environmental protection in conformance with the Environmental Accounting Guidelines 2005 issued by the Japanese Ministry of Environment.
- Calculation basis for the economic benefits of environmental protection measures
 - **Scope of benefits in environmental accounting:** The Fujitsu Group records the actual benefits and estimated benefits (risk avoidance benefit and deemed benefit) of reducing environmental impact related to the following items.
 - Benefit of reducing the environmental impact related to resource usage in business activities
 - Benefit of reducing the environmental impact related to environmental loads and waste emissions resulting from business activities
 - Benefit of reducing the environmental impact related to goods and services produced by business activities
 - Benefit of reducing the environmental impact related to transportation and other activities
 - **Investment benefit materialization period and basis:** The accounting period for actual economic benefits has been aligned with the depreciation and amortization period for investments (60 months). However, the accounting period for economic benefits derived from reducing personnel costs related to the environmental management system is 12 months, in line with the main thrust of the environmental management system, which is reviewed every year. With regard to estimated economic benefits, the accounting period for economic benefits derived from capital investment is the same as the depreciation and amortization period (60 months) for actual economic benefits. Benefits corresponding to a given fiscal year, such as the amount of contribution to environmental protection and the avoidance of operational losses, are recorded only for that fiscal year. The basis for accounting for economic benefits is as follows.

- Contribution of environmental protection activities to added value derived from production activities
The Fujitsu Group recognizes support provided by environmental protection activities to production activities as an economic benefit. Accordingly, the amount of contribution is determined by multiplying the added value derived from production activities by the ratio of the maintenance and operation cost for environmental protection facilities to the total facility cost of each site.
$$\text{Contribution} = \text{Added value} \times \text{Maintenance and operation cost for environmental protection facilities} / \text{total facility cost}$$
- Avoidance of operational loss at business sites due to non-compliance with laws and regulations
The Fujitsu Group recognizes the avoidance of operational loss as the amount of loss that is avoided in the event of the materialization of risk arising from neglect to make upfront investments needed to comply with laws and regulations. The number of operational loss days is determined based on the size of investment related to the environment, but shall not exceed three days.
$$\text{Benefit} = \text{Added value} / \text{Operational days} \times \text{Operational loss days}$$
- Benefit of public relations activities
This benefit is calculated by converting publicity efforts related to environmental protection activities in newspapers, magazines and TV into an advertising cost.
$$\text{Benefit} = \text{Advertising cost of newspapers, magazines and TV} \times \text{Number of advertisements ran and programs broadcast}$$
- R&D benefit
The Fujitsu Group calculates the amount of additional earnings resulting from the contribution of R&D achievements for environmental protection purposes, such as Super Green Products and environmental solutions.

*1 Fujitsu's major consolidated subsidiaries worldwide:

FUJITSU ISOTEC LIMITED, FUJITSU IT PRODUCTS LIMITED, Fujitsu I-Network Systems Limited, Fujitsu Interconnect Technologies Limited, Fujitsu VLSI Limited, Ecolity Service Limited, FDK CORPORATION, FUJITSU OPTICAL COMPONENTS LIMITED, FUJITSU KASEI LIMITED, Fujitsu Laboratories Limited, FUJITSU COMPONENT LIMITED, Shimane Fujitsu Limited, FUJITSU PERIPHERALS LIMITED, SHINKO ELECTRIC INDUSTRIES CO., LTD., FUJITSU SEMICONDUCTOR LIMITED, Fujitsu Semiconductor Technology Inc., Fujitsu Telecom Networks Limited, Fujitsu Ten Limited, TOCHIGI FUJITSU TEN LIMITED, TRANSTRON Inc., PFU Limited, FUJITSU FRONTECH LIMITED, Fujitsu Mobile-phone Products Limited, Fujitsu Wireless Systems Limited, Fujitsu Computer Products of Vietnam, Inc., Fujitsu Network Communications, Inc., Fujitsu Telecommunications Europe Limited, FUJITSU TECHNOLOGY SOLUTIONS (HOLDING) B.V.

The Fujitsu Group also aggregates data on R&D costs and benefits related to environmental solutions from subsidiaries other than those shown above. However, the data is aggregated solely for environmental solution costs and benefits, so the relevant subsidiaries are not included in the scope of disclosure for major consolidated subsidiaries.

Fiscal 2012 Environmental Accounting Results

Breakdown of Results (Investment and costs) [billion yen]

Fiscal 2012 Environmental Accounting Results - Breakdown of Results (Capital investment, costs, economic benefits)

Item		Main areas covered	Capital investment (billion yen)	Costs (billion yen)	Economic benefits (billion yen)
Business area costs/benefits	Pollution prevention costs/benefits	Air/water pollution prevention, etc.	0.40(-0.39)	4.29(-0.45)	6.71(-0.40)
	Global environmental conservation costs/benefits	Global warming prevention, saving energy, etc.	0.86(-0.90)	3.11(-0.02)	1.77(+0.05)
	Resource circulation costs/benefits	Waste disposal, efficient utilization of resources, etc.	0.05(-0.04)	2.53(-0.29)	10.95(-0.10)
Upstream/downstream costs/benefits		Collection, recycling, reuse, and proper disposal of products, etc.	0.00(-0.02)	0.83(-0.09)	0.46(-0.04)
Administration costs/benefits		Provision and operation of environmental management systems, environmental education of employees, etc.	0.12(-0.50)	3.26(-1.01)	0.49(-1.05)
R&D costs/benefits		R&D on products and solutions that contribute to environmental protection, etc.	0.52(+0.17)	24.07(+3.13)	52.11(+2.97)
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.	0.04(±0.00)	0.15(+0.02)	0.40(+0.20)
Total			1.99(-1.67)	38.26(+1.27)	72.89(+1.64)

- 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 2012

The results of this accounting for FY 2012 showed costs of 38.26 billion yen (a 3.4% increase from the previous year) and the economic benefits were 72.89 billion yen (a 2.3% increase from the previous year). Thus both costs and benefits increased. Also, our capital investment was 2.00 billion yen (a 45.4% decrease from the previous year).

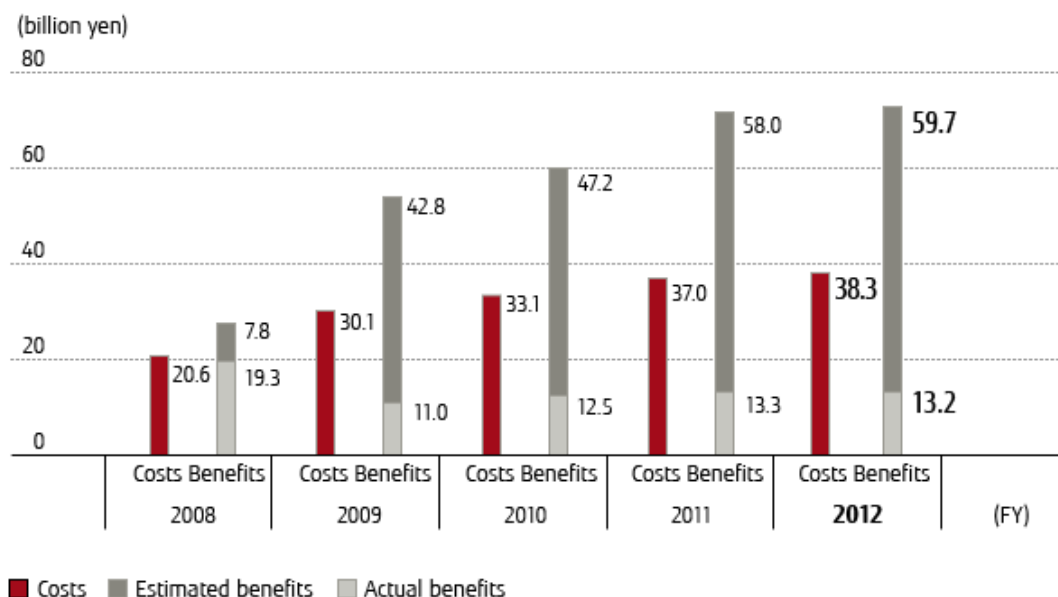
Reasons for Changes in Costs and Economic Benefits

Costs increased by about 1.3 billion yen compared to the previous year. Decreases of about 0.5 billion yen in pollution prevention costs, about 0.3 billion yen in resource circulation costs, and about 1.0 billion yen in administration costs were recorded, but were outweighed by an increase of 3.1 billion yen in R&D costs. Pollution prevention costs and resource circulation costs fell because businesses were sold off and activity declined in related businesses. The decline in administration costs resulted from a review of applicable cost items for environmental advertising. R&D costs, meanwhile, grew considerably as a result of the Fujitsu Group's drive to come up with products and solutions that contribute to environmental protection for the benefit of customers and society.

Economic benefits increased by about 1.6 billion yen compared to the previous year. Decreases of about 0.3 billion yen in pollution prevention benefits, about 0.2 billion yen in resource circulation benefits, and about 1.0 billion yen in administration benefits were recorded, but were more than offset by an increase of about 3.0 billion in R&D benefits. The decline in pollution prevention benefits resulted from a decrease in new pollution-control-related capital expenditures at manufacturing plants and a resulting decrease in operating loss risk avoidance benefits. Resource circulation benefits fell because of lower gains on sales of unnecessary goods at manufacturing plants. Administration benefits fell because of lower environmental advertising costs, following a review of applicable cost items for environmental advertising, and resulting lower estimated benefits from that environmental advertising. As for R&D benefits, our ability to continuously provide products and solutions that contribute to environmental protection for the benefit of customers and society resulted in an increase in economic benefits determined via our proprietary estimation method.

R&D costs and benefits, therefore, both grew steadily in FY 2012. In the future, we will continue to refine environmental management by evaluating our environmental protection activities using environmental accounting.

Trends in Costs and Economic Benefits



The History of Fujitsu's Environmental Activities

The History of Fujitsu's Environmental Activities

1935	Park-style design adopted for new Kawasaki Plant at suggestion of Fujitsu's founder, Manjiro Yoshimura.
1938	Kawasaki Plant completed.
1972	Environmental control sections established at each plant.
1987	Ozone Layer Protection Committee established.
1989	Environmental Committee established.
1990	Environmental management evaluation system implemented.
1991	Environmental Engineering Promotion Center established.
1992	Fujitsu's Commitment to the Environment formulated. Use of CFCs and carbon tetrachloride for cleaning eliminated. Energy Saving Committee established.
1993	Product Recycling Committee established. Waste Control Committee established. Fujitsu Environmental Protection Program (Stage I) formulated. Product Environmental Assessment Guidelines formulated. Domestic Affiliated Companies' Environmental Protection Council established. Environmental Information Service (FJ-CUG) inaugurated.
1994	First issue of Eco-Plaza environmental bulletin published. Use of 1,1,1-trichloroethane eliminated. 1st Fujitsu Group Environmental Technology Exhibition held. Fujitsu Environmental Emblem designed. Overseas Environmental Information Network began operations.
1995	Environmental Management System Committee established. Recycling system established and implemented. Fujitsu Group Worldwide Environmental Protection Council established.
1996	Fujitsu Environmental Protection Program (Stage II) formulated. Environmental Engineering Center homepage placed on intranet. Chemical Emissions Reduction Committee established. First Environmental Report published.
1997	Environmental homepage established on Fujitsu website. All domestic manufacturing sites certified ISO14001 compliant.
1998	Reforestation activities started in Thailand. Green Product program launched.
1999	Environmental accounting introduced. Reforestation activities started in Vietnam.

2000	Four development and service sites in Japan certified ISO14001 compliant. Corporate Environmental Affairs Unit established. Desktop PC awarded Eco-mark for first time.
2001	Fujitsu Environmental Protection Program (Stage III) formulated. Calendar using paper from sustainable forest published. Reforestation activities started in Malaysia.
2002	A world's first: Tin-zinc-aluminum lead-free solder developed. A world's first: Biodegradable plastic parts with lower environmental load employed in notebook computers. Fujitsu Group Environmental Policy established. A world's first: Magnesium alloy recycled in-house applied in notebook computers.
2003	Support for reforestation activities employing Rhythm Forest reforestation network game initiated. Zero waste emission achieved by all 13 plants in Japan.
2004	ISO14001 integrated certification acquired by all Fujitsu Limited sites, among largest systems in Japan. 100% Green Product ratio achieved for all newly developed products. Fujitsu Group Environmental Protection Program (Stage IV) formulated.
2005	ISO14001 certification acquired by all Group companies in Japan. Supply of Super Green Products began.
2006	ISO14001 globally integrated certification acquired, including overseas Group companies. Established global environmental management framework for the Group as a whole.
2007	Fujitsu Group Environmental Protection Program (Stage V) formulated. Green Policy Innovation project, which reduces our customers' environmental load through green ICT, started.
2008	Green Policy 2020 medium-term environmental vision formulated.
2009	Biodiversity Action Principles formulated.
2010	Fujitsu Group Environmental Protection Program (Stage VI) formulated.
2011	Environmental Management Dashboard operations began full-scale.
2012	Further empowered the Environmental Committee and established the Environmental Management Committee chaired by the Company's President.
2013	Formulated the Fujitsu Group Environmental Action Plan (Stage VII).

Making Factory Energy Usage “Visible” on a Production Line Basis and Using this Information to Save Energy



Factories that have already spent many years reducing their energy consumption find it difficult to propose and implement additional improvement measures. One reason for this is energy management that is still in need of refinement.

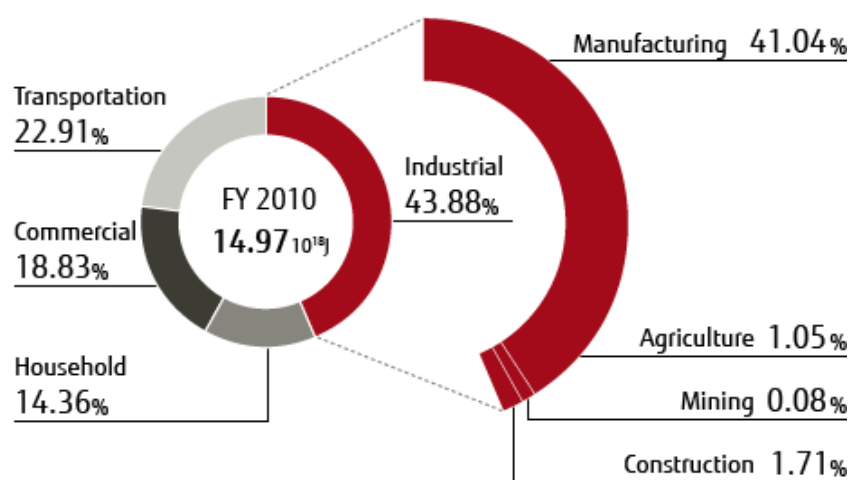
Fujitsu Isotec Limited (FIT) has determined how much energy it uses all the way down to the level of individual production processes, and begun to implement energy-saving measures tailored to conditions for individual production processes.

Current Status of Energy Conservation in Manufacturing Industries

The impetus for Japan's energy conservation policies can be traced back to the two oil shocks the country suffered in the 1970s. These two events, which had enormous economic impacts, brought to light the importance of conserving energy and created conditions for the advancement of energy-conservation policies^{*1}. As a result, by the end of the 1980s, the industrial sector was leading major improvements in energy efficiency. Nevertheless, it still accounted for over 40% of energy consumption. Manufacturing industries^{*2}, which account for more than 90% of industrial energy consumption, are still being encouraged to do more to save energy.

In recent years, however, companies have begun to say that limits are being approached in energy conservation effectiveness and openly wondering what else they can do. Indeed, with energy consumption per base unit basically unchanged since the 1980s, energy conservation efforts have reached their limits.

Energy Consumption by Sector



Source: "Energy White Paper 2012," published by the Japanese Ministry of Economy, Trade and Industry, Agency for Natural Resources and Energy

*1 Advancement of energy-conservation policies:

[Refer to "Energy-Related Problems and Responses," published by the Japanese Ministry of Economy, Trade and Industry, Agency for Natural Resources and Energy](#)

*2 Manufacturing industries:

[Refer to the "Energy White Paper 2012," published by the Japanese Ministry of Economy, Trade and Industry, Agency for Natural Resources and Energy](#)

Energy Management at Manufacturing Facilities Facing a New Problem

Fujitsu Isotec Limited (FIT), which manufactures and recycles personal computers and servers in Date City, Fukushima Prefecture, has implemented various energy-conservation measures under Fujitsu Group Environmental Action Plans. Through the gradual adoption of energy-conservation measures, including solar panels, greenery to insulate walls, LED lighting, and high-efficiency heat pumps for air-conditioning, FIT has steadily reduced the overall energy consumption of its manufacturing facilities.

Nevertheless, it found itself facing a new problem. It realized that it was looking only at overall energy consumption and had neither accurate information on how much energy it was using in real time, nor any idea of the amount of energy consumed at particular times by particular areas of its operations. That meant it could not propose or implement energy conservation measures tailored to particular energy uses.



Solar power generation



LED lighting



Greenery to insulate walls



High-efficiency heat pumps

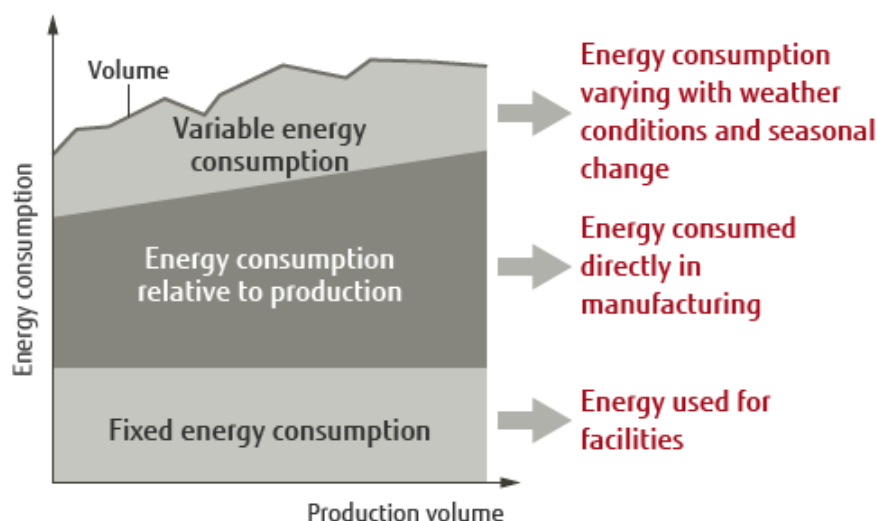
Detailed Visualization with the Environmental Management Dashboard

In April 2012, therefore, FIT adopted the Environmental Management Dashboard, developed by Fujitsu as a tool for accurately identifying energy usage by specific areas of a business' operations. With sensors installed in its manufacturing facilities, FIT was able to see visual representations of detailed energy consumption data gathered from throughout its operations via a network.

As a result, FIT can now manage its overall manufacturing facility energy consumption in terms of three categories - energy consumed directly in manufacturing (energy consumption relative to production volume), energy used for lighting, air conditioning, and other facilities (fixed energy consumption), and energy used for air conditioning and other purposes that vary depending on weather conditions and seasonal changes (variable energy consumption).

Production-Related Energy Management Moving Forward

Use ICT to Visualize Energy Consumption in 3 Categories



VOICE

We will use the Environmental Management Dashboard to determine our next moves.

Kazuto Ara, General Affairs Division Manager, Fujitsu Isotec Limited

We were finding it difficult to identify areas in which to invest for additional energy savings, and unable to move forward in this sense. With the Environmental Management Dashboard, we can determine in real time how much energy we are consuming by production process, and immediately identify anomalies and waste.

Even though we have not yet taken full advantage of everything the dashboard has to offer, I already see it as a tool that exceeds common sense in pointing the way to what we should do next.



Managing Energy Relative to Production Resulting in New Process-Level Awareness

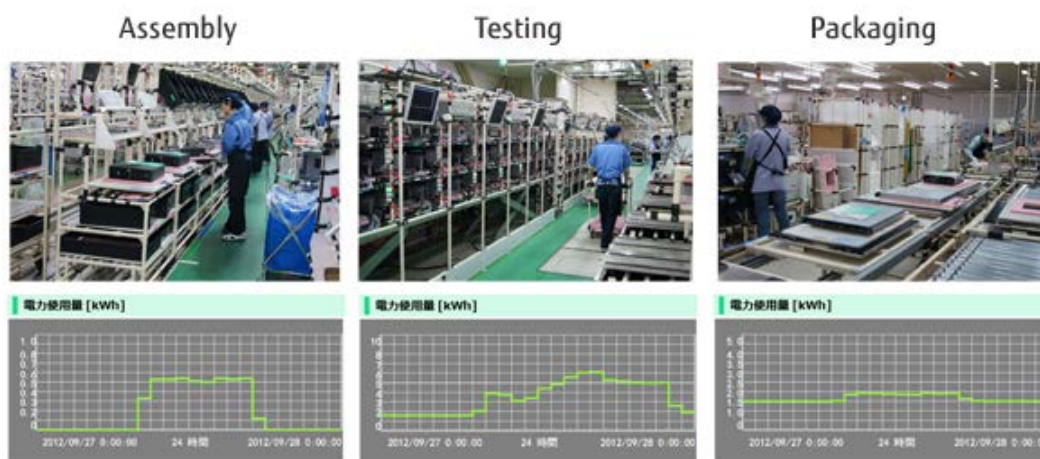
Energy consumption relative to production, a measure of energy consumed directly for production activities, provides a clear visual representation of energy consumed by production line, production process (assembly, testing, and packaging), and product.

Visualization by production line



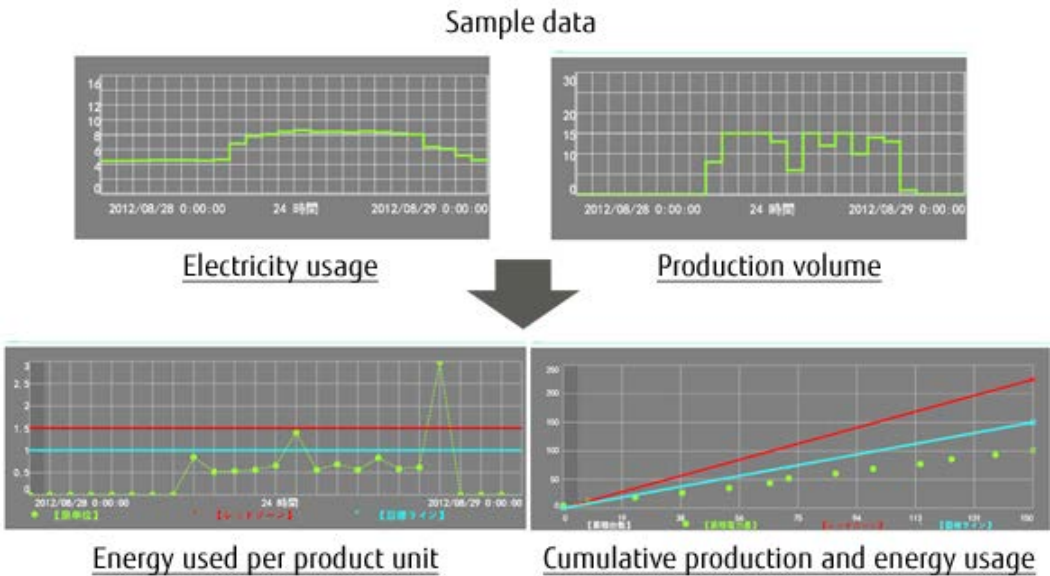
This has enabled us to clearly know energy consumption by area and identify impracticalities, waste, and abnormalities, none of which was possible when managing energy consumption at an overall level. For example, we learned that electricity was being used during certain times in the assembly process, even though products were not being made; that electricity was being used in the testing process even on weekends, when there were no production activities; and that standby electricity consumption, which we thought was fixed, dropped during certain times. Awareness of these facts gave rise to additional energy-saving measures.

Making Energy Consumption Visible by Production Process



In addition, making production-related energy consumption "visible" in real time by product has made it possible to monitor energy usage on a unit basis and made it easier to both identify the causes of energy usage on anomalies and confirm the effectiveness of improvements.

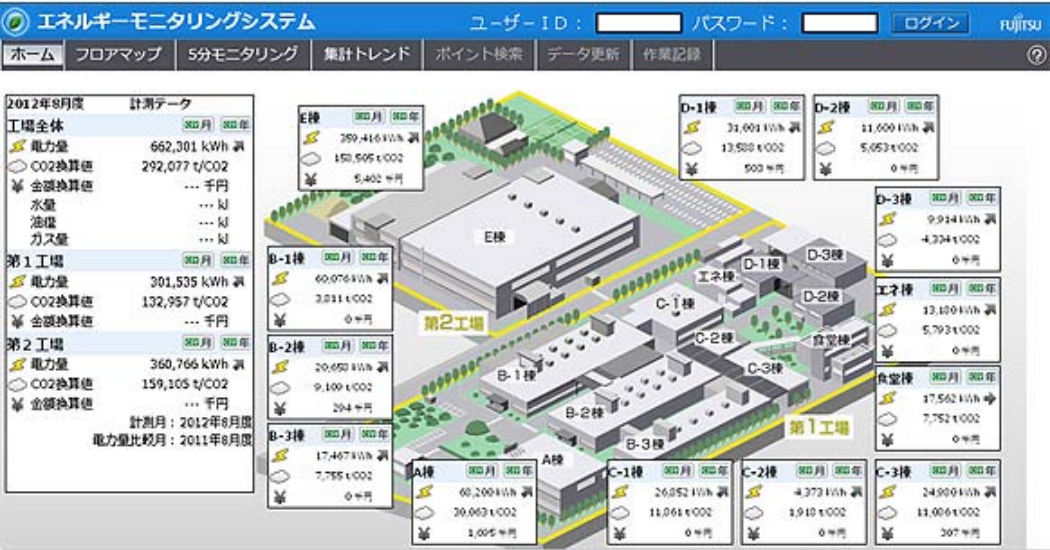
Making Energy Usage per Product Unit "Visible"



Real-Time Display of Fixed Energy Consumption Making Employees Aware of Energy Consumption

Facility-related fixed energy consumption made "visible" for plants, buildings, and units of floor space, can be checked by employees through the personal computers on their desks. The ability to check even indirect energy consumption, which is not related to production, allows employees to be aware of the amount of electricity consumed by the unit in which they work, and pay more attention to energy usage.

Making Energy Consumption "Visible" by Plant and Building



VOICE

We are accumulating know-how and helping to improve the Fujitsu Group's environmental management. Masaichi Tochimoto, President, Fujitsu Isotec Limited

Since our adoption of the Environmental Management Dashboard, units participating in our regular Environmental Committee meetings have begun to actively report new situations that have come to their attention. At present, only a few of these discoveries have resulted in new actions, but I would like to see us implement new, effective measures by continuing along this path and having everyone participate in energy management.

In addition, while continuously working to save energy in our own operations, we will accumulate energy-saving knowledge for plant and office settings, and use it to help strengthen the Fujitsu Group's environmental management.



FIT's energy management efforts using the Environmental Management Dashboard have only just begun. FIT, however, is embarking on an effort to involve all employees at every level of its organization, from top management down, in energy management.

Going forward, FIT will establish energy-conservation objectives tailored to its operations, and analyze the status of its energy usage, to uncover waste and make its operations more energy-efficient.

Highlight — Benefitting to Customers and Society —

Contributions to Improve the Environment in Saudi Arabia through the Environmental Management System



The rapid industrialization of developing countries has resulted in significant environmental problems such as water and air pollution. To help solve these problems in developing countries, we apply expertise and know-how used in overcoming pollution here in Japan.

By providing Japanese know-how and cutting-edge technology, Fujitsu is helping to improve the environmental conditions in Saudi Arabia's industrial cities. These efforts are being undertaken through multi-layer collaborations with governments, academia, and various enterprises.

Air and Water Pollution: Urgent Problems

In recent years, Saudi Arabia, which has the world's largest oil reserves, has been aggressively pursuing industrial diversification and industrial city development through national policies. The Saudi Industrial Property Authority (MODON) is charged with the mission of advancing economic development and solving social problems through the operations of industrial cities. MODON has already created 20 industrial cities and is planning to increase the total to 40, covering a total area of approximately 150,000 hectares, by FY 2015.

Environmental issues, such as air and water pollution, which often accompany rapid industrialization and urbanization, have become an urgent challenge in Saudi Arabia's industrial cities, where Fujitsu has performed on-site measurements, and detected serious levels of air pollution (SOx and NOx), and water pollution (COD).



Field survey in Saudi Arabia

Pulling Together Japanese Expertise and Know-How

Through analysis of enormous volumes of data, ICT enables not only the solving of problems but also creation of new values for a prosperous society. Fujitsu is utilizing the power of ICT to help solve environmental problems and create a sustainable society in Saudi Arabia.

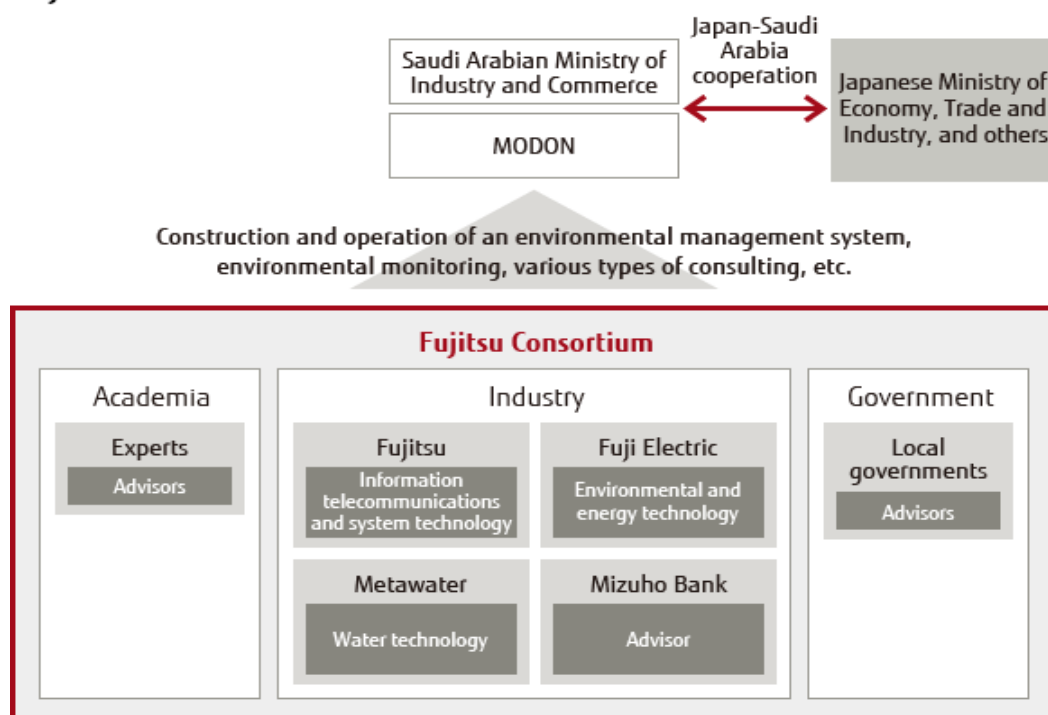
Fujitsu and MODON have been engaged in a detailed dialogue concerning approaches for environmental improvements in Saudi Arabia's industrial cities. The history of these discussions is summarized below.

Dialogue History

Date	Content
September 2011	Fujitsu Arabia signed a "memorandum of understanding" (MOU) with MODON to collaborate in the development of eco-friendly industrial cities.
October 2011	Fujitsu's proposal for using cutting-edge IT and environmental technology to make industrial areas eco-friendly was adopted by the Japanese Ministry of Economy, Trade and Industry as an FY 2011 "Feasibility Study for the Overseas Development of Smart Communities." With the government's support, the project is expected to become a model case for the export of infrastructure systems through public-private collaboration.
December 2011 and January 2012	Detailed local surveys and measurements were conducted on two occasions.
February 2012	With the Japanese Minister of Economy, Trade and Industry and the Saudi Arabian Minister of Industry and Commerce present, Fujitsu and MODON entered into their second MOU, at a Japan-Saudi Arabia industrial cooperation forum.
November 2012	An environmental symposium was held in Saudi Arabia to help raise environmental awareness.

To improve the environment in Saudi Arabia, Fujitsu has formed a consortium with Fuji Electric Co. Ltd., Metawater Co. Ltd., and Mizuho Bank, Ltd. In addition, we are encouraging cooperation from local governments that have experience in overcoming pollution problems, and from researchers and other experts, to make this endeavor an "All Japan" effort to apply Japanese expertise and technology.

Project Structure



Using ICT to Centrally Manage Industrial City Environmental Information

In March 2013, MODON and Fujitsu signed a contract for the development and operation of environmental management systems in Saudi Arabia's industrial cities. Under this agreement, Fujitsu and MODON will work together to build a monitoring system that employs air and water quality sensors to constantly monitor environmental pollution. The new system will be installed in the Dammam 2nd Industrial City in Saudi Arabia's Eastern Province, the Riyadh 2nd Industrial City in the Saudi capital, and the Jeddah 1st Industrial City in the western province of Mecca.



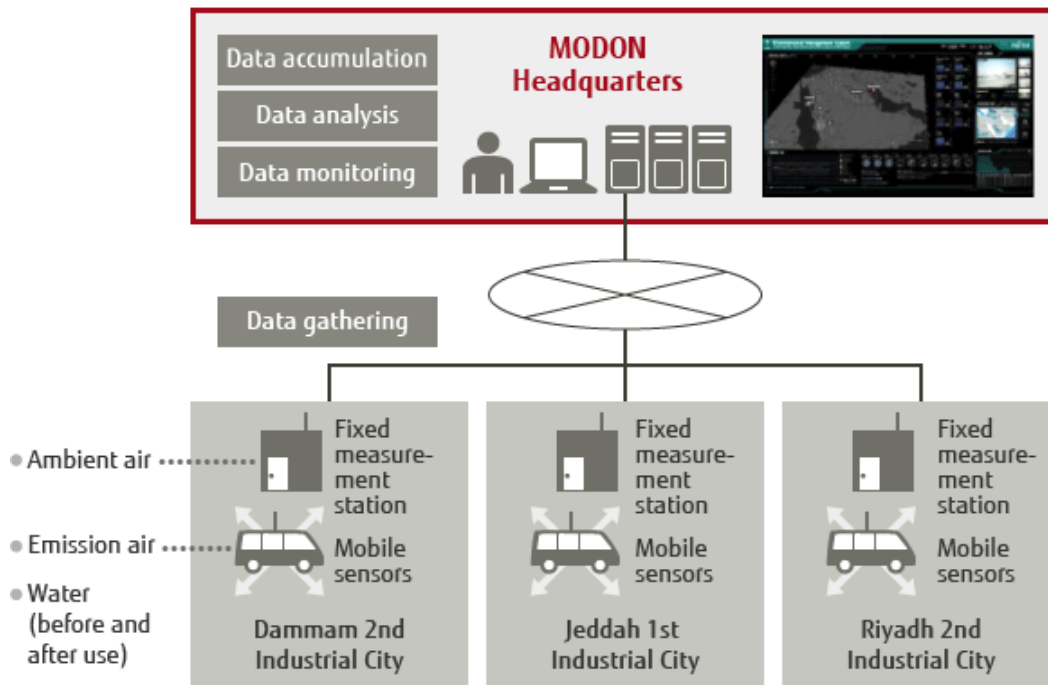
Signing ceremony

These systems will use fixed measurement stations to continuously gather air-quality data and mobile sensors to gather data on industrial and other atmospheric emissions, and effects on the water supply. Measurement data will be centrally managed at MODON, and the creation of visual representations on 3D maps will be used to promote efficient, integrated monitoring.

Once the systems have been constructed, Fujitsu will operate them, monitor environmental conditions, and provide various types of consulting services using measurement data to make environmental improvements.



Environmental Management System Overview



Toward the Realization of Eco-Industrial Cities

Environmental data gathered and analyzed by environmental management systems will be used to evaluate achievement of environmental standards and to make decisions on environmental policies for making improvements. In addition, these data, by making it possible to quickly respond to air and water pollution incidents, will help to minimize damage and promote safety and security in the daily lives of local residents.

It is expected that environmental data will also be used to develop environmental strategies and systems, as in the cases of the construction of a sustainable environmental management model and the development of eco-city master plans for Saudi Arabia.

Going forward, Fujitsu will continue to use Japanese expertise, technology, and the power of ICT, to help improve the environment in Saudi Arabia.

Fujitsu Group's Green ICT Helping Achieve a Low-Carbon, Prosperous Future

Through its advanced environmental solutions, services, and products, the Fujitsu Group's green ICT is helping to reduce the environmental burden generated by all aspects of our daily lives and by society. We are continuously widening the scope of our efforts in this field so we can help more countries and regions and more people.



Environmental and Energy Management

Reducing Electricity Consumption through an Energy Management System (Japan)

YKK's Kurobe plant installed a factory energy management system (FEMS) that, by making energy consumption "visible" in real time, helped them to not only achieve energy savings but improve production quality and productivity as well.

- [Fujitsu and YKK Jointly Develop Factory Energy Management System \(FEMS\) \[Press release\]](#)

[Solutions for Saving Electricity and Other forms of Energy \[in Japanese\]](#)

By helping to save electricity and energy in customers' offices, we are reducing the environmental burden, but we are also contributing greatly to cost reductions (for people, goods, transportation, etc.).

Related Solution





Office and Buildings

Achieving Battery-less Electronic Devices and Wireless Sensor Units (Japan)

For homes and commercial buildings, we have developed energy management sensor units that require no battery or battery replacement and greatly extend the life of batteries for portable devices.

- [Fujitsu Semiconductor Releases Two New Energy Harvesting Power Management IC Products, Contributing to a Low Carbon Society \[Press release\]](#)

Energy harvesting

The use of technology to "harvest" energy by converting light, vibration, and other microsources of potential energy all around us into electricity.



Factories

Helping to Lower Resource Usage (Japan)

Mitsubishi Heavy Industries' aircraft design and development operations reduced the amount of resources it uses by cutting the number of prototypes it makes in designing and developing aircraft. It also reduced its electricity consumption by consolidating server functions.

[The "Engineering Cloud" Next-Generation Manufacturing Environment \[in Japanese\]](#)

The Engineering Cloud makes it possible to comfortably use 3D CAD applications on a standard PC - no dedicated workstation required - and to share information across multiple business sites.

Related Solution



Regional and Governmental Bodies

Major Reduction in Office Space and a 45% Cut in CO2 Emissions (Japan)

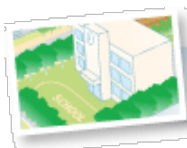
When the government offices of Nakano Ward in Tokyo introduced a new information system, they realized greater efficiency in both their work and use of office space. They also cut their CO2 emissions by about 45%.

[IPKNOWLEDGE Internal Information System \[in Japanese\]](#)

Consolidating office support systems certainly benefits operational efficiency but it also promotes highly efficient and transparent administrative and local government operation.

Related Solution





Education

46% Reduction in Electricity Consumption through Virtualization (Japan)

Kansai University consolidated servers and adopted cloud services, and slashed its electricity consumption by 46% and cut total ICT costs by around 30%.

- [Fujitsu Cloud Solution Enhances Kansai University's Educational Research System Platform \[Press release\]](#)

[Virtualization Technology and Organic Storage Services II \[in Japanese\]](#)

Our virtualization technology and cloud-based file server services contribute to the optimization and more efficient use of ICT resources, and tighter security.

Related Solution



Medical

Supporting the Transition to Paperless Operations at a Medical Institution (Finland)

Finland introduced a system allowing all of the country's medical institutions to share information on patients' medical and prescription histories, making paper-based management a thing of the past.

Electronic medical record network

This system makes it possible for people to receive appropriate medical services based on their medical histories, even at medical institutions they are visiting for the first time.

Helping to Improve the Quality of Medical Care and Reduce CO2 Emissions (Laos)

With less need to transport patients by aircraft and have physicians travel long distances, the Laotian Ministry of Health cut CO2 emissions by around 16.5 tons per year.

Remote medical consultation system

With this system, doctors in different locations can discuss medical options while viewing patient data monitors.

Related Solution





Department Stores and Supermarkets

Major Reduction in POS Electricity Consumption (Japan)

A fashion retailer with 150 POS units eliminated its nighttime data transmissions and paper journals, and cut its CO2 emissions by about 45%.

["TeamStore/S" POS Systems for Specialty and Other Retailers \[in Japanese\]](#)

This system not only offers intuitive, easy-to-understand operation; it also responds to safety and security needs and is environmentally friendly.

Related Solution



Financial Institutions

40% Reduction in CO2 Emissions through a System Upgrade (Japan)

Hokuriku Bank reduced the amount of space it needs to maintain, operate, and manage its ICT equipment, saved on energy needed for air conditioning, and cut its annual CO2 emissions by 119 tons - about 40%.

Virtualization technology

We support efficient use of computer resources at all our business' locations by consolidating servers previously located at each site and installing virtual desktops.

Related Solution



Households

Contributing Residents to Save Energy and Water

The installation of network infrastructure made it easy for a building's tenants to monitor and manage their energy and water usage.

- [Case Study - Lend Lease](#)

[SSPF \(Smart Sensing Platform\) \[in Japanese\]](#)

We have made it easy to build energy management systems for residential and commercial structures.



Networks

Helping an Airport Conserve Energy (U.K.)

We provided a high-availability network to BAA Airport Limited, an airport management company, and helped London's Heathrow Airport save energy.

- [BAA Selects Fujitsu For Critical Network Integration Project At New Heathrow Airport Terminal \[Press release\]](#)

Network construction

Design and construction of a network connecting the boarding, security, and all other airport terminal systems.

Related Solution



Datacenters

30% Reduction in Electricity Consumption (Singapore)

Singapore's National Institute of Education, through measures like server consolidation, cut its electricity consumption by 30%, and its annual electricity expense by \$60,000.

-  [Case Study - National Institute of Education, Singapore](#) [340KB]

Virtualization technology

Technology that optimizes datacenter usage and increases operating efficiency.

Related Solution



Transportation and Shipping

Using Vehicle Location Data to Cut CO2 Emissions by up to 30%

Using a navigation function to determine the shortest route to a destination holds fuel consumption down and has reduced CO2 emissions by up to 30%.

"SPATIOWL" Cloud Service Using Location Data [in Japanese]

Consolidates a massive volume of vehicle location and other data on an ICT database and applies it to optimize the use of transportation resources.

Related Solution





Smart Cities

Contributing to Environmentally Friendly Urban Development (Japan)

The Aizuwakamatsu area of Fukushima Prefecture, by introducing renewable energy, has taken an important step in developing an environmentally friendly, low-carbon society; revitalizing the local economy; creating new industry, and building a community robust against disasters.

- [Fujitsu, Aizu Wakamatsu City and Tohoku Electric Power Launch Smart Community Project in Japan's Aizu Wakamatsu Region \[Press release\]](#)

Application of renewable energy

Support for the introduction and use of electricity generation from solar, wind, wood biomass, and other forms of renewable energy.

Related Solution



Agriculture

Using ICT to Reduce Applications of Agricultural Chemicals (Japan)

A vineyard and winery in Yamanashi Prefecture, by gathering temperature data in real time, succeeded in reducing the number of times it applies agricultural chemicals by 17, and cut its expenses by 300,000 yen.

Multi-sensing network

A network that measures and provides video data on weather conditions, and remotely collects measurement data, without entailing communications costs.

Related Solution



Forestry

Helping to Conserve Biodiversity through the Appropriate Management of Forest Resources (Japan)

We made it possible to quickly and economically survey the status of invasive plant species threatening ecosystems, and examine the distribution of multiple tree species.

- [Fujitsu Contributes to Conserving Biodiversity with Hyperspectral Imaging Analysis \[Press release\]](#)

Forest species categorization service

This service can accurately identify cedar, cypress, and other tree species by analyzing aerial photographic data.



From Space

Helping to Stop Global Warming by Measuring GHGs

We are participating in a project that is taking high-precision measurements of CO₂ and methane concentration distributions from space and using them as basic data for initiatives to fight global warming.

"Ibuki" (GOSAT) observation data processing system

We have developed a data processing system for identifying concentrations of greenhouse gases, and an algorithm for producing related calculations.

Related Solution



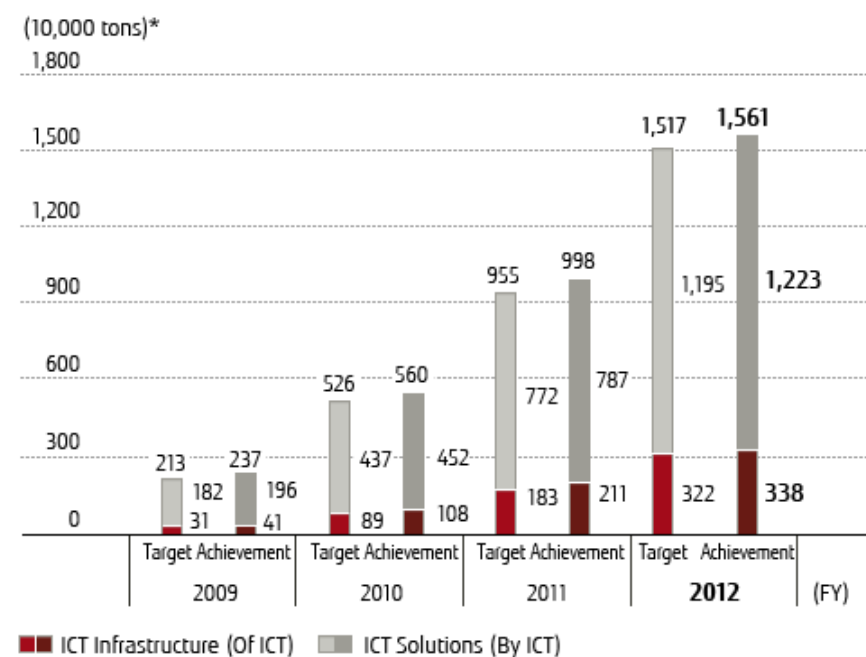
- [Green Policy Innovation: Contribute to reducing the environmental Burden of customers and society](#)
- [Fujitsu Group's Green ICT Helping Achieve a Low-Carbon, Prosperous Future: Case Study Archives](#)

Green ICT-Achievements in Reducing CO2 Emissions

Since FY 2007, the Fujitsu Group has been promoting Green Policy Innovation, a project for helping to reduce the environmental burden on customers and society, through Green ICT. The project's global objective is to cut CO2 emissions by more than 15 million tons over a four-year period from FY 2009 to FY 2012.

FY 2012 was the last year of the Green Policy Innovation project and over the four years beginning with FY 2009, we contributed to cumulative CO2 reductions of 3.38 million tons by providing ICT infrastructure products and 12.23 million tons by providing ICT solutions. With the total of 15.61 million tons, we succeeded in achieving our objective for the Green Policy Innovation project.

CO₂ Reduction Targets and Achievements by Green ICT



*Cumulative from FY 2009

Leading-Edge Green ICT R&D

We are concerned with reducing environmental burdens from the initial policy formulation stages in our leading-edge R&D, and are continuously creating technologies that contribute to saving energy and the use of next-generation sources of energy.

Basic Approach

Promote the Development of Products and Services that Contribute to Lower Environmental Burdens

To achieve the goal of reducing CO2 emissions by about 30 million tons a year in Japan by 2020, as proposed in our medium-term environmental vision Green Policy 2020, we need to develop revolutionary leading-edge technologies that are even more effective at reducing environmental impact.

Fujitsu Laboratories Ltd., which handles the Fujitsu Group's leading-edge green ICT R&D, has introduced the slogan "Further strengthen leading-edge green ICT R&D and contribute even more to Fujitsu Group business," and is pushing forward with R&D on technologies that can help lower environmental burdens. Based on the concept of Green R&D, we are establishing and implementing policies from an environmental standpoint in all development work, from materials and devices through to facilities, systems and solutions.

Basic Approach to R&D

Promoting the development of revolutionary leading-edge technologies with green ICT as a priority area

- Rendering visible the low-carbon benefits across the entire value chain
- Low-carbon technologies for ubiquitous equipment
- Energy-saving technologies for datacenters and networks
- Environmental solution technologies

Synergies between overall technology development and open innovation

- Consolidation of elemental technologies from materials and devices to solutions
- Global technology collaborations

Initiatives in FY 2012

Quantitatively Evaluating CO2 Emission Reduction Benefits from the R&D Stage

To accelerate our environmentally-oriented R&D, for all of our leading-edge technologies being developed, since FY 2010 Fujitsu Laboratories has been promoting initiatives to quantitatively evaluate the benefits of reduced CO2 emissions (i.e. environmental contribution) at the usage stage of products and services leveraging those technologies. These initiatives are implemented across all units in our laboratories, enabling researchers to evaluate the environmental impact of their technologies, thus clarifying R&D factors that should be focused on from an environmental perspective. Furthermore, by including "environmental impact" as an additional aspect for the technology-evaluation axes of "performance/ functionality/quality" and "cost" that had been primarily used to evaluate technologies thus far, well-balanced R&D of leading-edge technologies developed across these 3 axes is enabled.

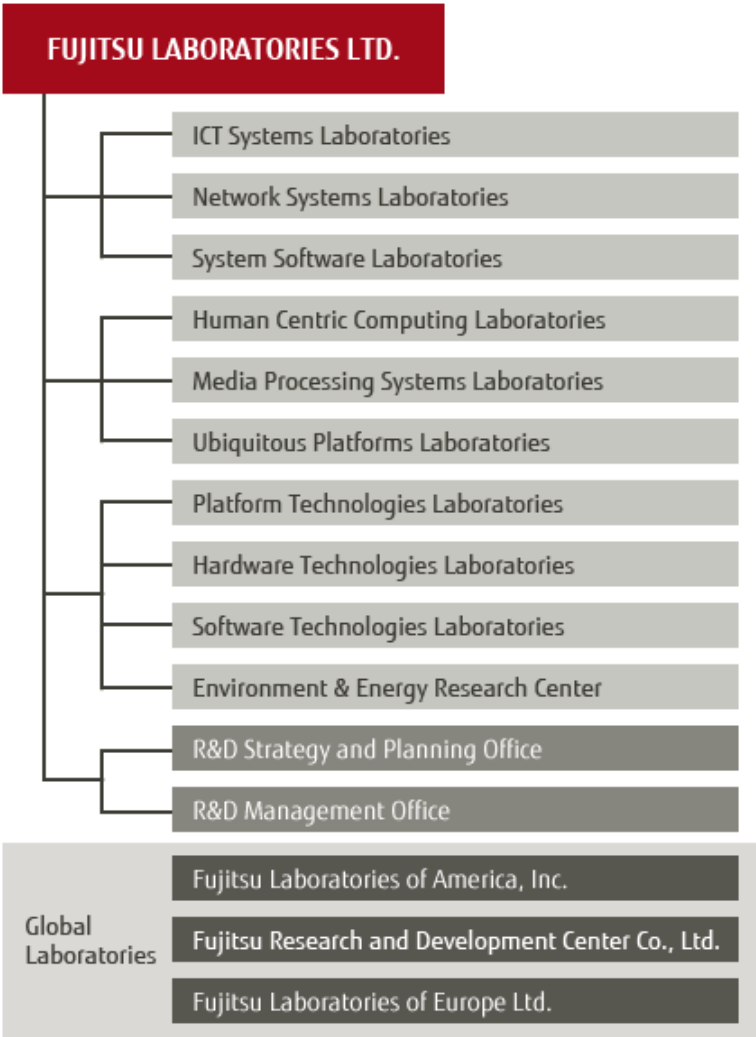
The Fujitsu Group Environmental Protection Program (Stage VI), which covers the period FY 2010 to FY 2012, sets forth "Strengthening leading-edge green ICT R&D" as a priority, and divides this into two areas with specific targets: next-generation datacenters and networks, and solutions.

The target for the next-generation datacenter and network area is developing technologies that can double the overall efficiency*¹ of ICT equipment*² by the end of FY 2012 (April 2012 - March 2013). The target for the solutions area, also by the end of FY 2012, is to increase by at least 70% the development ratio*³ for technologies that improves the effective reduction of environmental burdens.

In FY 2012, we achieved the FY 2012 target of developing technologies that can increase ICT equipment efficiency by at least 2.0 times. We did this by developing technologies in the area of next-generation datacenters and networks. These include a high-capacity power supply technology for servers that is capable of 94.8% conversion efficiency and technology that increases the efficiency of fiber optic network resource usage, enabling up to 40% greater communications capacity. We also met our FY 2012 target in the solutions area, where we were able to achieve a development ratio of 73% for technologies that improve the effective reduction of environmental burdens, and thus met our target of 70% for the fiscal year.

While further increasing the environmental contribution of our leading-edge technologies, Fujitsu Laboratories will aim to expand applications to areas such as complete systems, including those in which the individual technologies, operations and management work together.

Organization of Fujitsu Laboratories Ltd. (As of May 2013)



*1 Overall efficiency:
Efficiency of electricity consumption

*2 Efficiency of ICT equipment:
This refers to the total efficiency of various "efficient-ICT equipment" combined, with such equipment made efficient by individual technologies developed.

*3 Development ratio:
Development ratio of technologies that improve the effective reduction of environmental burden = (Technologies that improve the effective reduction of environmental burden / All technologies developed) x 100

Case Study

Energy-Saving A/C Fan Control Technology for Container Datacenters

In April 2012, Fujitsu Laboratories Ltd. announced the development of energy-saving system control technology that uses server information to control air-conditioner fans for datacenters.

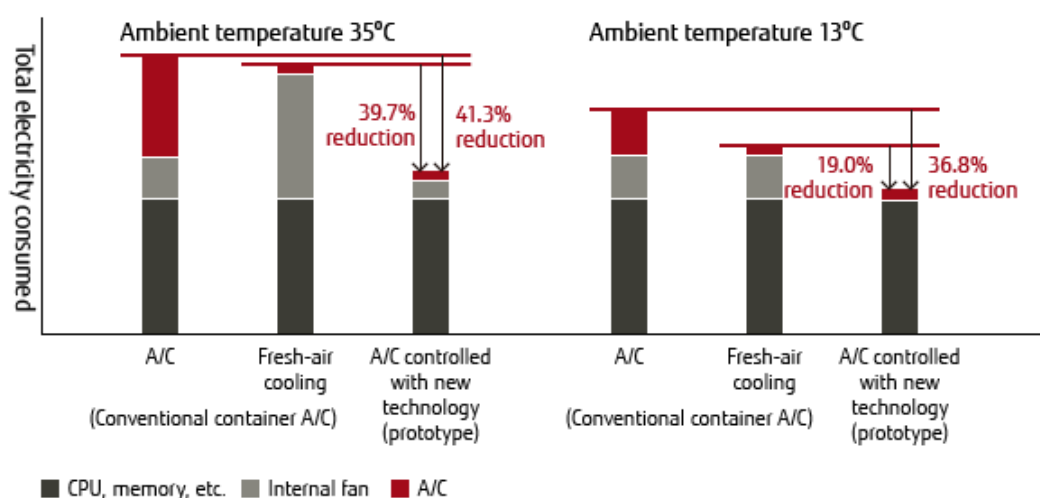
Using servers that lack internal fans and using only container air-conditioning fans for cooling is an effective way to cut the electricity consumption of container datacenters. Air-conditioning systems in conventional datacenters, however, operate without detecting the temperatures of individual servers and their CPUs. This wastes electricity on excessive cooling and can result in performance declines due to inadequately cooled CPUs.



Prototype container datacenter

The technology newly developed by Fujitsu controls container air-conditioning fans based on assessments of CPU temperatures relative to ambient temperature, and electricity consumption data for servers. This maintains appropriate server operations and minimizes the datacenter's overall electricity consumption. In prototype testing, energy consumption was reduced by up to approximately 40% compared to a conventional container datacenter consisting of servers with internal fans (See the figure below.) Fujitsu Laboratories is performing verification testing of this technology with plans for applying it in the operating and management systems of datacenters planned for introduction in FY 2013.

Energy-Saving Performance of Fujitsu's Energy-Saving System Control Technology



- [Fujitsu Develops Power Saving System Control Technology for Container Data Centers \[Press Release\]](#)

Case Study

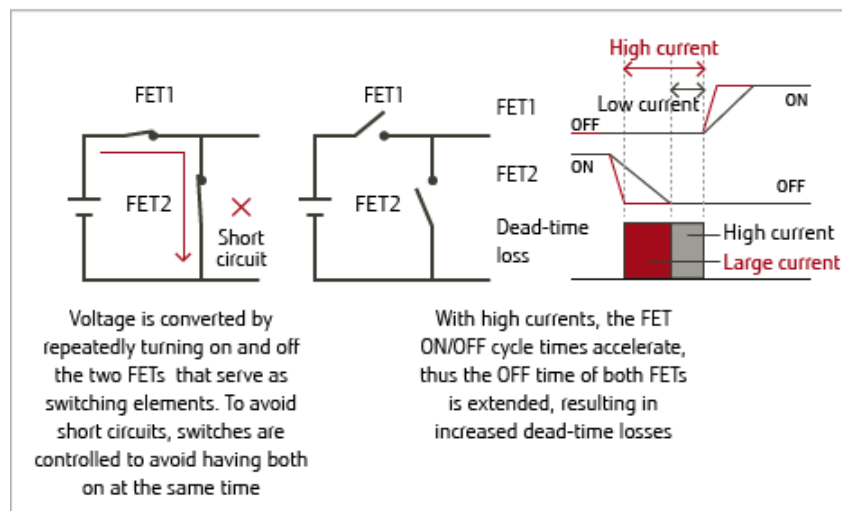
High-Output Server Power Supply Unit with the World's Highest Conversion Efficiency

In April 2012, Fujitsu Laboratories Limited announced the development of a new high-output power supply unit that provides high-performance servers with 2.3 kW of power and, at 94.8%, the world's highest conversion efficiency rate. This technology reduces server electricity consumption and contributes greatly to energy efficiency for datacenters.

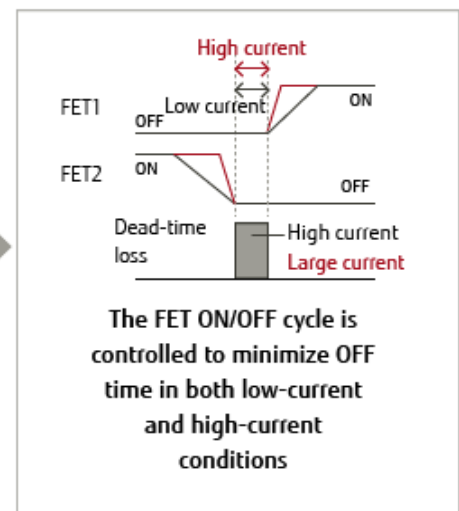
Power supply units that provide power to servers convert AC power to DC power, losing some power in the process. In reducing the overall power consumption of servers, therefore, it is important to increase the power conversion efficiency rate. Fujitsu has reduced power losses by using digital control technology and newly developed circuit technology. Efforts to achieve even greater efficiency, and evaluate reliability and stability, will move forward with plans to include this power supply unit in 2014 server products.

Digital Control Technology that Alleviates Dead-time Loss in Voltage Conversion

Conventional technology



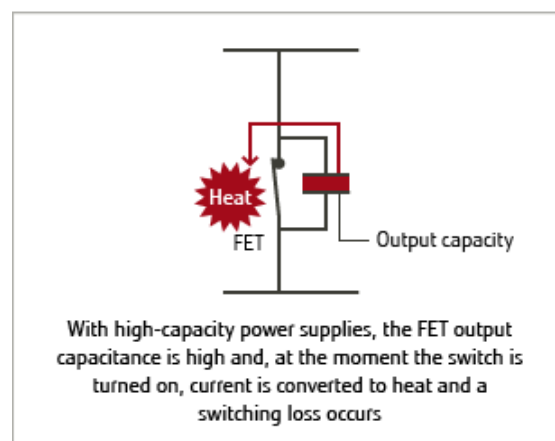
Newly developed technology



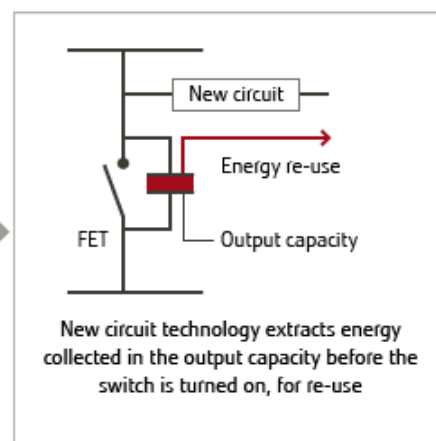
FET: Field Effect Transistor

New Circuit Technology for Reducing Switching Loss at the Moment the FET is Switched On

Conventional technology



New technology



- [Fujitsu Develops a 2.3kW High-capacity Power Supply Unit for Servers Offering a World-leading Conversion Efficiency Rate of 94.8% \[Press Release\]](#)

Case Study

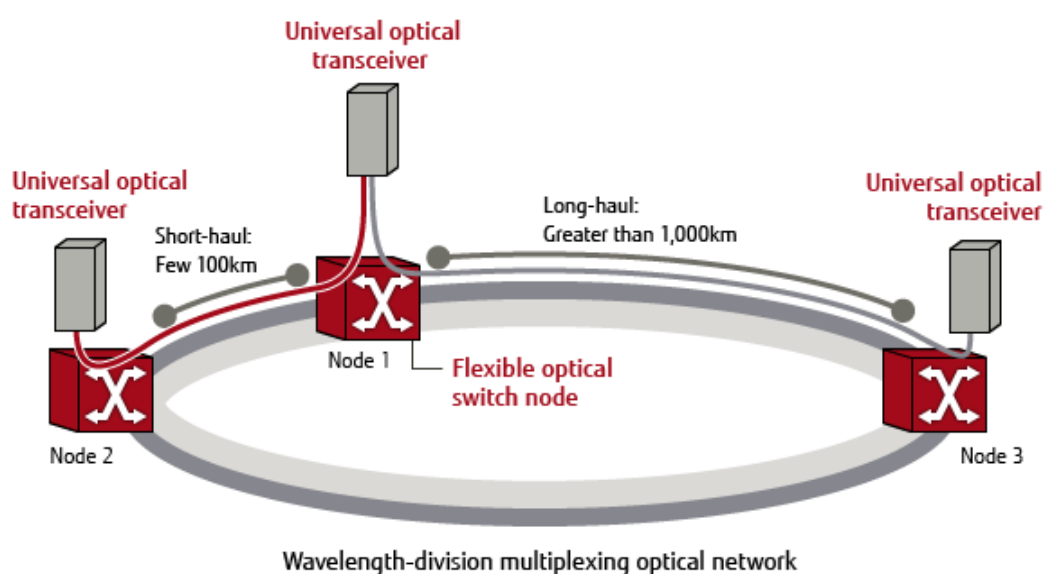
World's First Technology for Increasing Utilization Efficiency for Optical Network Resources without Disrupting Service

Fujitsu Laboratories Ltd, Fujitsu Laboratories of America, Inc., and Fujitsu Limited announced in September 2012 the development of the world's first technology for future long-haul and metropolitan optical networks that can dynamically alter the architecture of optical network resources and enhance utilization efficiency without disrupting service.

Development efforts have resulted in two new technologies. One is "flexible optical node" technology that is not subject to optical signal wavelength, modulation scheme, or route limitations. The other is "spectrum defragmentation" technology that uses portable optical nodes to increase the utilization efficiency of in-service optical network resources. These technologies enable the lowering of power consumption through the use of fewer network devices, and improve network communications capacity by up to 40%.

Optical Network using Flexible Optical Node Technology

Reduces number of devices via software-side switching between short- and long-haul modes on a single transceiver



- [Fujitsu Develops World's First Technology to Increase Efficiency of In-Service Optical Network Resources \[Press Release\]](#)

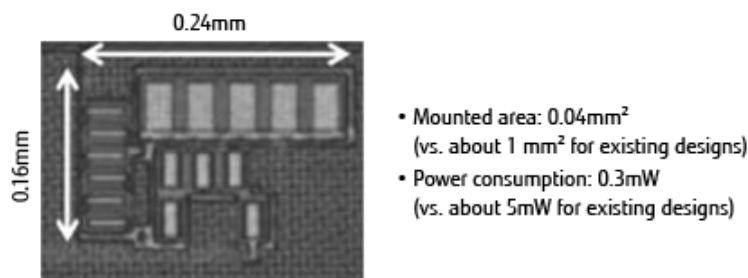
Case Study

Compact, Low-Power Power Detector for Smartphones and Other Mobile Terminals

Fujitsu Laboratories Limited announced in September 2012 the development of a compact, low-power CMOS power detector for use in smartphones and other mobile terminals.

By using a diode-based power detector with a new technology for temperature compensation, the new CMOS power detector enables high-precision power detection without the use of a large amplifier. Requiring only 1/25th the mounted area of conventional detectors and less than 1/10th the power, the new product contributes to efforts to make mobile terminals smaller, less expensive, and more energy efficient. Going forward, this technology will be used to further improve detection precision.

Newly Developed Power Detector Chip



- [Fujitsu Develops World's First On-chip CMOS Power Detector with Temperature Compensation \[Press Release\]](#)

- [Leading-Edge Green ICT R&D : Case Study Archives](#)

Fujitsu Group Environmental Action Plan Stage VII

Development of Innovative Technologies that Can Help to Lower the Environmental Burden of Solutions and Products

The amount of information flowing across the Internet is continually growing, and it is anticipated that there will be a rise in the amount of electricity consumed by ICT devices and related solutions and services, which support increasingly information-dependent social infrastructure. In addition, considering the growth of emerging economies and the re-examination of dependence on various energy resources, with a renewed awareness in the wake of the Great East Japan Earthquake, there is a pressing need to realize a sustainable, low-carbon society.

With R&D priorities in the domains of Ubiquitous Innovation, Social Innovation, IC Innovation, and Manufacturing Innovation, by developing environmentally valuable innovative technologies and through the provision and use of solutions, services, and products, Fujitsu Laboratories is contributing to the realization of an environmentally conscious, prosperous society.

FY 2013 Initiatives

In FY 2013, Fujitsu Laboratories Ltd. is continuing initiatives aimed at quantitatively evaluating the CO₂ reduction impacts of technologies under development. It is also considering benchmarks that would enable novel measurements of resource efficiency in the case of technologies for which the calculation of CO₂ equivalents is impractical.

This recurring cycle, in which objective evaluations of advanced technology are performed and results are then fed back to R&D units by the Leading-Edge Green R&D Committee, is the vehicle through which the environmental value of research results is continuously enhanced and innovative technologies offering high environmentally valuable are developed. We use press releases and other media to actively disseminate information on the innovative technologies we develop and help to lower the environmental burden of society by turning these technologies into products.

Eco-Friendly Products

We promote eco-friendly design in our products to lower their environmental impact throughout their whole life cycles.

Eco-Friendly Product Development

The Fujitsu Group has adopted a unified Group-wide approach to eco-design for newly designed products and works to improve environmental performance throughout the product life cycle. We have been implementing our own environmental assessments for all of our products since 1993, and strive to develop eco-friendly products that reflect environmental considerations in such areas as energy saving, 3R design^{*1}, non-use of hazardous chemical substances, packaging materials, and information disclosure.

^{*1} 3R design:

Design based on the principles of reduce, reuse and recycle

Development of Green and Super Green Products

The Fujitsu Group has established its Procedure for Product Environmental Green Assessment to further the development of environmentally conscious products. Products that meet these standards are designated as Green Products. We are constantly upgrading our Green Product Evaluation Standards in an effort to strengthen and improve the efficiency of our Green Product development.

To pursue the design of environmentally conscious products at a global level, we comply with the international IEC 62075 standard^{*2} and our own Eco Design Standard^{*3}, which we established in 2011 to incorporate environmental and other market demands. Fujitsu PCs and servers are designed in Japan and Europe, based on these standards, and sold globally.

In developing new products, we work to create "Super Green Products." Super Green Products are those that meet the required conditions for Green Products and are also top-class in terms of low energy consumption and/or 3R design technology, non-use of hazardous substances, packaging materials and use of eco-friendly materials and technologies. Super Green Products are products or systems recognized as having environmental characteristics superior to those of others we supply or that are available on the market. In FY 2010, the definition of Super Green Products was revised to include the stricter requirement of "being in the top level in both energy saving and other parameters (such as resource saving)."

In FY 2012, another 12 products were recognized as being Super Green Products. Since we began this scheme in FY2010, the number of Super Green Products has steadily increased and for the updated 2012 total, 39% of our Green Products were also Super Green Products, meaning we had achieved the target set in Fujitsu Group Environmental Action Plan (StageVI).

^{*2} IEC 62075:

Standard on "Audio/video, information and communication technology equipment-Environmentally conscious design." This standard was published in 2008 and established as JIS C 9914 in 2010 in Japan.

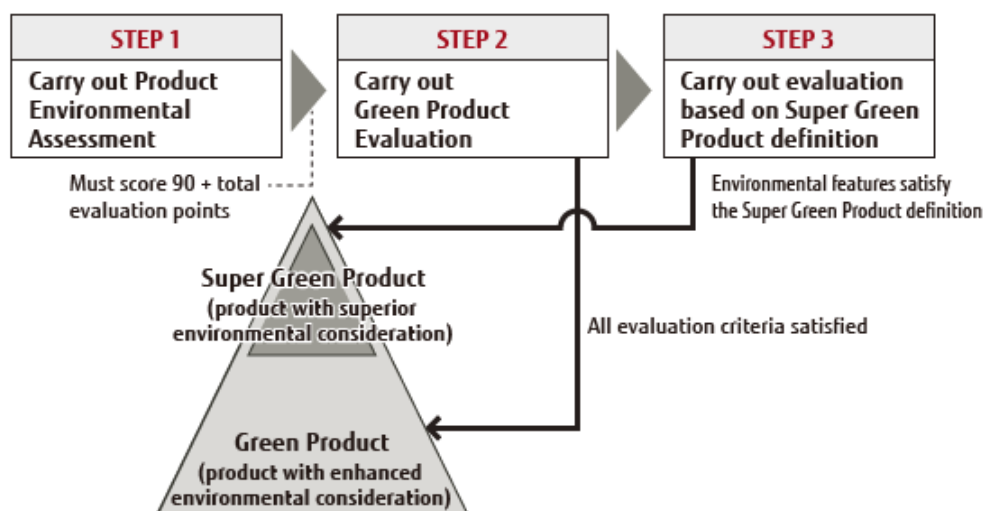
^{*3} Covered products:

Personal computers, servers, and storage systems.

Evolution of Environmentally Conscious Design

Period	Environmental Action Plan Targets and Measures	Regulation Formulation
Environmental Protection Program (Stage I) (FY 1993 - FY 1995)	<ul style="list-style-type: none"> Improve product recyclability by 50% compared to FY 1992 	Guideline for Product Environmental Assessment
Environmental Protection Program (Stage II) (FY 1996 - FY 2000)	<ul style="list-style-type: none"> Product recycling measures Advancement of Green Product development 	Procedure for Green Product Evaluation Procedure for LCA
Environmental Protection Program (Stage III) (FY 2001 - FY 2003)	<ul style="list-style-type: none"> Make all newly developed products Green Products 	Procedure for OEM Product Environmental Evaluation
Environmental Protection Program (Stage IV) (FY 2004 - FY 2006)	<ul style="list-style-type: none"> Offer Super Green products from the main product groups of all business units 	Procedure for Product Environmental Green Assessment Procedure for Super Green Product Operation
Environmental Protection Program (Stage V) (FY 2007 - FY 2009)	<ul style="list-style-type: none"> From all business units, provide newly developed products 50% or more of which are Super Green Achieve environmentally efficiency factor of 2 	Procedure for Environmental Efficiency Factor Evaluation
Environmental Protection Program (Stage VI) (FY 2010 - FY 2012)	<ul style="list-style-type: none"> From all business units, provide newly developed products 30% or more of which are Super Green Achieve environmentally efficiency factor of 4.0 	Eco Design Standard
Environmental Action Plan (Stage VII) (FY 2013 - FY 2015)	<ul style="list-style-type: none"> Make 50% of all new products top-level performers in terms of energy efficiency Improve resource efficiency for new products by 20% compared to FY 2011 	-

Mechanism for Green and Super Green Product Evaluation



Case Study

Fujitsu ESPRIMO X913-T - stylish front-end device PC features space-saving design and the latest power-saving technology

From the earliest stage of development the Fujitsu ESPRIMO X913-T has incorporated energy conservation concepts in its design. The seamless frame, slim-panel and the adjustable stand with an integrated base unit reduce the number of parts and the overall material consumption. Best possible compliance with international standards is achieved with certifications like EPEAT and ENERGY STAR®.

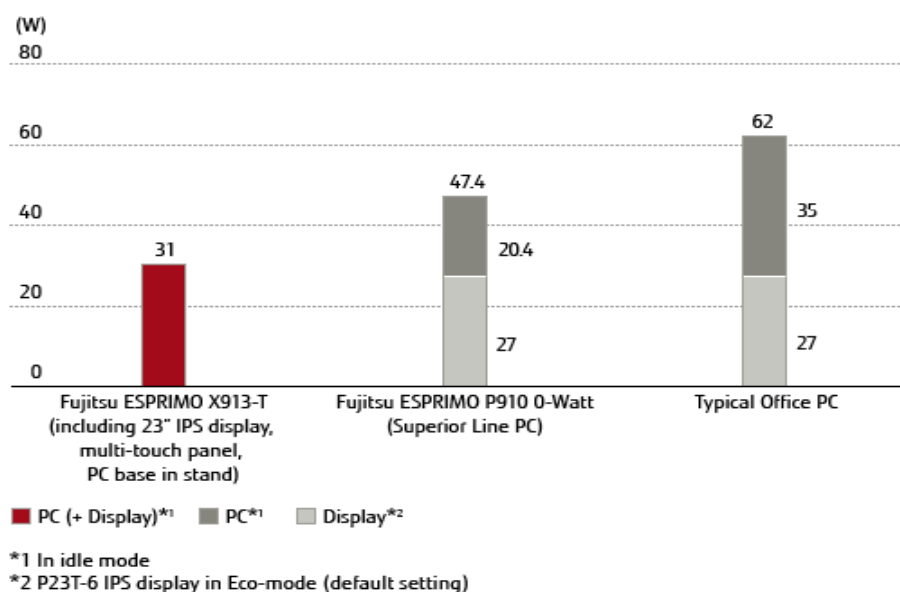
A 90% efficient onboard power supply is integrated into the base unit of the Fujitsu ESPRIMO X913-T. It is designed according to the 80 PLUS Gold certification and performs even under low loads (10% load) with an energy efficiency of 87%. This leads to highest energy savings to cut customers' costs and reduces the cabling to a minimum.

Further energy savings can be addressed using the presence sensor in the optional multifunction module. The ultrasound presence sensor detects the movement and body outline of anyone sitting within the sensor's range. When the user leaves his PC different settings can be chosen to achieve maximum energy savings. This leads to energy savings of up to 50% versus a typical office PC:



ESPRIMO X913-T

Electricity Consumption Comparison



VOICE

Fujitsu Technology Solutions ESPRIMO X913-T System Developer Wilhelm Neukam

Supplied with or without a touch panel, depending on the customer's desires, the newly developed Esprimo X series products manifest the Fujitsu brand promise of "Shaping tomorrow with you." This new series responds to customers' needs for environmentally conscious products and demonstrates once again Fujitsu's leadership at the forefront of ICT products.



Case Study

Fujitsu PRIMERGY TX120 S3p The World's Most Energy-Efficient Tower Server

Fujitsu's PRIMERGY servers deliver the ultimate in productivity, cost performance, and flexibility, and simultaneously lower environmental burden while supporting increases in datacenter efficiency and energy cost reductions, for organizations of all sizes. The PRIMERGY TX120 S3p, introduced in May 2012, features a power supply with a high, 90%, conversion efficiency rating and patented 0-Watt technology that completely eliminates losses in off mode. Power consumption savings, in other words, are achieved not only when the server is being used but also when it's not. At over 6,100 overall ssj_ops/watt, the PRIMERGY TX120 S3p leads the world on the SPECpower_ssj®2008^{*4} benchmark for server energy efficiency.



PRIMERGY TX120 S3p

With its ultra-compact form factor, the PRIMERGY TX120 S3p requires very little space. It also weighs less than half a conventionally sized server and is made with far fewer resources. Its super-quiet system means this server can be used in office environments and even on desks. And its use of a halogen-free motherboard is just one more example of our commitment to doing ever we can to lower environmental burden.

^{*4} SPECpower_ssj®2008:

An industry-standard benchmark developed by Standard Performance Evaluation Corporation (SPEC®) to evaluate the energy efficiency of volume server class computers.

VOICE

Fujitsu Technology Solutions, Senior Director of Product Management for Servers Uwe Romppel

For datacenters and offices, it is not enough for servers to be friendly to the environment. Whether in a small office, or large-scale datacenter, the ICT platform must be suited to the customer's needs. An appropriate level of performance and the highest levels of energy efficiency are absolute requirements; but there are also cases in which compact design and minimal noise are key concerns. PRIMERGY servers are solutions that deliver the computing power businesses demand and do so with the industry's highest levels of customizability.



Case Study

Smartphones Friendly to the Environment and People

ARROWS series smartphones, as the first smartphones in the Japanese market to offer a quad-core processor (F-10D and ISW13F), full-HD LCD (F-02E) and Softbank 4G compatibility (201F), and the world's first smartphone to offer Raku-Raku touch panel technology (F-12D), are constantly rising to the challenge of applying cutting-edge technologies. In the series' tablet computers (F-05E), we combined energy-saving technologies and a high-capacity battery to achieve battery life among the best in the industry. Also, with our proprietary "Human-Centric Engine" technologies for improving the user's visual, audio, and touch experience, tight security, and other features that realize ultimate ease-of-use, as well as water-resistance built into every model, we offer usability for a wide range of users in a range of different environments.

In developing these products, compliance with the RoHS Directive and other chemical substance restrictions is a given. We also, however, use Virtual Product Simulator (VPS) environments relying mainly on 3D-CAD systems to minimize resource usage in prototypes; display materials used in components, in order to facilitate recycling; take steps like reusing components in repairs; and work in other ways, as well, to use fewer resource in all product-related processes. As a result, all of our ARROWS series smartphones have been certified as Super Green products. Going forward, we aim to take these initiatives to an even higher level and further improve energy-efficiency performance to offer smartphones that are even friendlier to the environment and people.

ARROWS



ARROWS X (F-02E)



ARROWS Z (ISW13F)



ARROWS X (F-10D)



ARROWS A (201F)



Raku-Raku Smartphone (F-12D)



ARROWS Tab (F-05E)

ARROWS Series

VOICE

Mobile Phones Unit, Mobile Phones Division, Director of Engineering Dept.1 Masato Hori

In striving to create the world's most convenient smartphones - products that customers will find a joy to use - we are constantly aware of the 3Rs and work to minimize resource usage, even as we reach for new heights in functionality and performance. Developing smartphones that are attractive and friendly to both the environment and people is our ongoing mission.

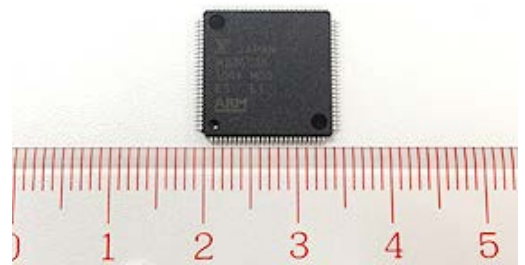


Case Study

MB86C36 LSI Cuts Power Consumption in Standby by up to 97%

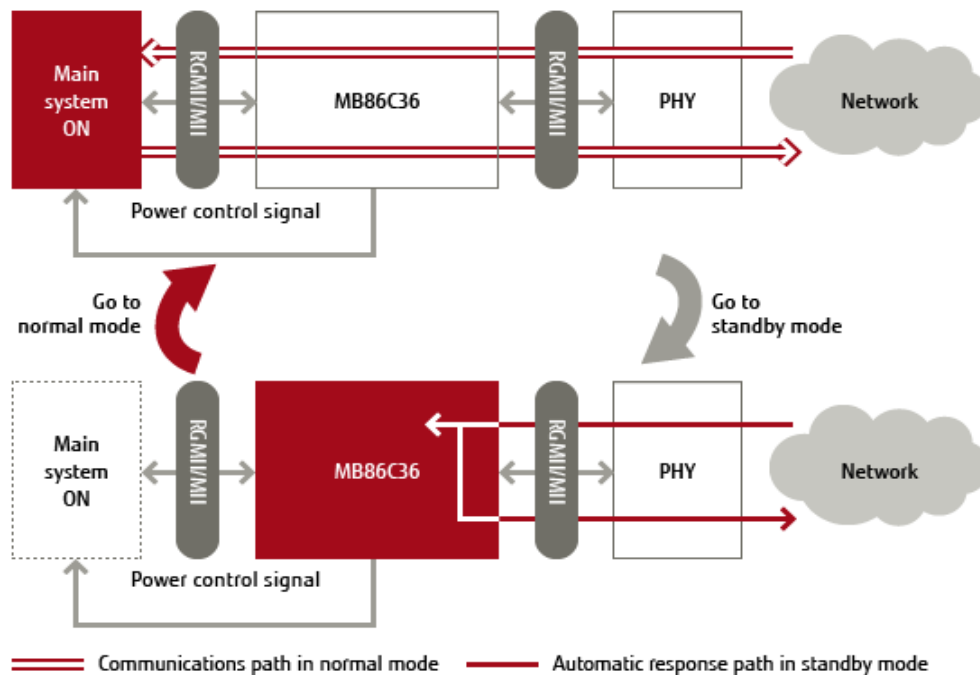
Amid ongoing worldwide efforts to lower environmental burden, reduction targets for power consumption by multifunction printers, conventional printers, routers, and other devices with network functionality are constantly being raised.

The MB86C36 is a network-answering proxy LSI that sits between a device's main system (CPU) and network interface. It maintains network connectivity by receiving network connections from external devices and automatically responding to them even when the CPU is in standby or powered off. This makes it possible to turn off power to the main system when the device is in standby and reduced power consumption by up to 97%.



MB86C36

What Happens in Standby



VOICE

Fujitsu Semiconductor Limited, MCU Business Division, MCU Development Department
Hiroyoshi Yamashita

Concentrating on minimizing power consumption not only at the LSI level but also at the system level, we have succeeded in greatly reducing overall power consumption. By providing the MB86C36 to as many customers as possible, we will help to reduce overall system power consumption and help to lower environmental burden.



Using the Eco-Efficiency Factor to Reduce Product Environmental Burden

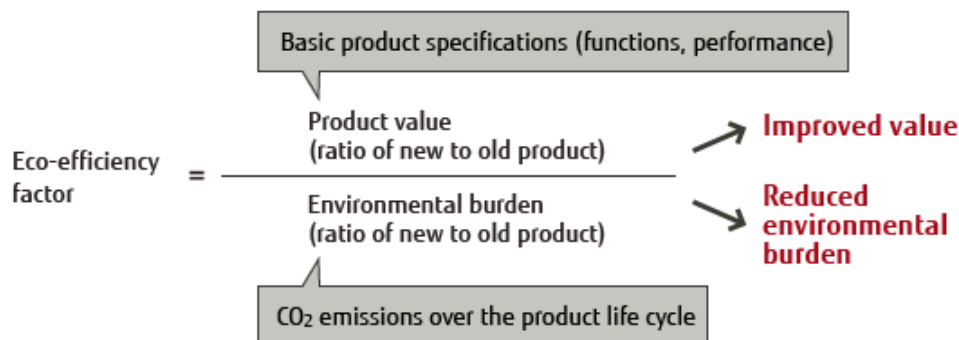
The Fujitsu Group introduced the eco-efficiency factor^{*5}, which simultaneously evaluates both environmental burden reductions and product value increases for newly developed Green Products in FY 2007. In the Fujitsu Group Environmental Protection Program (Stage VI), which covers FY2010-2012, we changed the base fiscal year for products from FY 2005 to FY 2008 and continued these activities. In FY 2011, we also revised our targets upwards based on actual results as of the end of FY 2010.

In FY 2012, we exceeded our newly established Fujitsu Group Environmental Protection Program (Stage VI) target of 4.0, with an actual result of 4.6. Product lines primarily responsible for contributing to these results included our mobile phones, mission critical IA servers, and photonics solutions. These improvements were achieved in part through improvements in transmission speeds and data processing capabilities, and through reductions in product weight and energy consumption.

^{*5} Eco-efficiency factor:

A method for comparing old and new products that quantitatively incorporates improvements in both product environmental burden and value (functionality and performance). This is an environmental index that promotes the creation of products that can provide even higher values with even lower environmental burden.

Eco-efficiency Factor



Carrying Out Life Cycle Assessment (LCA)

The Fujitsu Group has made it obligatory to perform LCAs for all its Green Products. Calculation standards have been formulated for each product family, and the Group uses its own database^{*6} to evaluate the environmental burdens of its products.

We perform LCAs to determine which parts of a product's life cycle account for the greatest proportion of the environmental burden, so that we can effectively design environmentally friendly products. We also apply the expertise developed through our LCA activities to calculate the eco-efficiency factor, and are actively using this as a tool for communicating with our customers.

^{*6} Own database:

Our own unique database of unit values, created by Fujitsu Laboratories based on input-output tables.

Case Study

SPARC M10-4 UNIX Server Cuts Life-Cycle CO₂ Emissions 72%

The SPARC M10-4 UNIX server, equipped with the SPARC64 X 16-core SoC (System on Chip) processor, greatly reduces the numbers of components on the printed board unit. It also represents success in greatly reducing power consumption during use - something achieved by incorporating Fujitsu's own high-efficiency power unit and other design improvements. In addition, the SPARC M10-4 uses a compact chassis made possible by Liquid Loop Cooling - the latest cooling technology - backplane-less straight cooling, as well as other packaging technologies.

And, its entire-life-cycle CO₂ emissions, compared with earlier products with the same maximum number of processor cores^{*7}, have been reduced by up to 72%. Based on these and other initiatives, the SPARC M10-4 has been certified as a Super Green product.

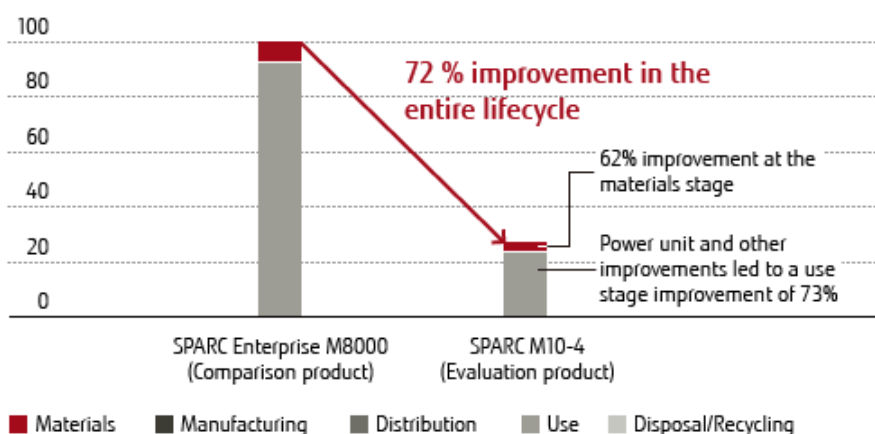


SPARC M10-4

^{*7} Comparison product:

SPARC Enterprise M8000 (Introduced in December 2010)

SPARC M10-4 LCA Improvement Effects (CO₂ emissions)



- [SPARC M1 Environmental Considerations \(Product site\)\(in Japanese\)](#)
- [Liquid Loop Cooling \(in Japanese\)](#)

Promoting 3R Design

Through its product environmental assessments and Green Product evaluations, the Fujitsu Group is working to apply a wide variety of 3R-friendly technologies that conserve resources and improve recyclability. Technologies being incorporated into our products that are effective in conserving resources include ways to reduce the number of parts and cables, to save space through improved performance and more highly integrated design, and digitization of manuals and other documentation.

We are also working to improve recycling rates by utilizing recyclable parts from the product design stage; and, by establishing recycle scheme, we promote the recovery and recycling of used ICT equipment. For example, usable parts are separated and extracted from products returned from leasing, and after checks to verify they are of the same quality as new parts, are either reused as parts in new products or as spare parts for maintenance.



Gaining experience in dismantling

Since 2010, we have held twice-yearly tours of Fujitsu recycling centers for designers throughout the Fujitsu Group, in an initiative to improve the recyclability of our products. During these tours, designers gain experience in dismantling post-consumer products, and recycling professionals provide feedback to designers through case studies showing factors that make dismantling difficult and by encouraging an exchange of views.

Going forward, we plan to draw up a design guideline containing case studies that Fujitsu recycling centers have accumulated showing factors that make dismantling difficult. Through this approach, we aim to encourage design from the product development stage that takes into consideration the ease of post-use dismantling.

Case Study

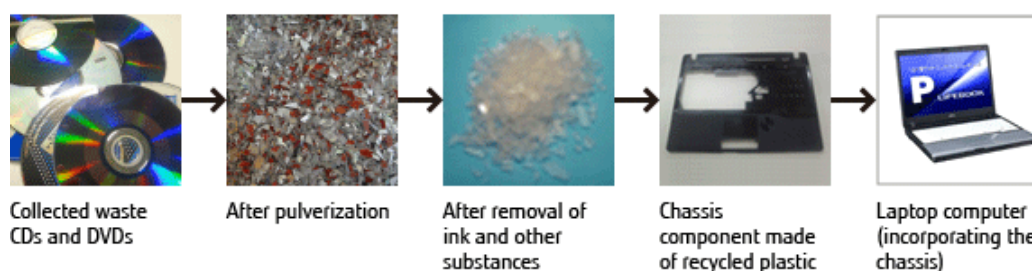
Reusing waste CDs and DVDs

The Fujitsu Group has established a recycling system in which waste CDs and DVDs are collected at Group recycling centers and the plastic recycled from them is reused in our products. This is the first example in the industry, and we have started production under this system with LIFEBOOK P772/E, a laptop released in the summer of 2012 for business customers.

Plastic from waste products is actually a mix of various types of plastic. That is why the quality of recycled plastic is not enough to use in products. In addition, using recycled plastic makes it difficult to comply with the RoHS Directive and other regulations because of the risk that it might contain heavy metals or other impurities. To overcome these problems, we noticed that our recycling centers have collected large amounts of waste CDs and DVDs, which are made of pure materials, and we made it possible to use these recycled materials in the manufacture of laptops, under quality control based on a chemical substance risk-management database created by Fujitsu Laboratories Ltd.

It is expected that this recycling system will make it possible to reduce the use of virgin plastic by 10 tons or more per year, and cut CO2 emission by about 15%, both in comparison to a conventional laptop manufacturing process. Looking ahead, we aim to build a recycling system that can handle waste plastic from sources other than CDs and DVDs, and expand the use of recycled material in our products to further reduce our resource consumption and environmental burden.

Reusing waste CDs and DVDs



Eco-Friendly Packaging

Fujitsu is working on a variety of methods for reducing its use of packaging and cushioning materials. Conventionally, a notebook computer is shipped individually packed in a cardboard box, but now, by packing several products in a single returnable container, we have reduced shipping space and cardboard waste. For larger products, we have replaced conventional cushion foam with returnable air packs. With this new packaging style, we are repeatedly using packaging materials, and can use the same materials for various products. Greater efficiency in the use of packaging materials has reduced the amount of cushioning materials and waste per shipment, thereby, significantly reducing CO2 emissions. We also use vegetable oil inks, which are lower involatile organic compounds (VOCs), a known atmospheric pollutant, to print the boxes used for packaging PCs and other equipment.

ICT Database System for Management of the Environmentally Conscious Product Design

We use ICT systems for the preparation and registration of Product Environmental Green Assessments and LCAs. We use these systems to centrally manage information on aspects of environmentally conscious design related to legal and regulatory compliance; materials and chemical content of purchased components; efforts to make products smaller, lighter, or more energy efficient; ease of recycling and dismantling.

Fujitsu Group Environmental Action Plan (Stage VII) Product Targets

For ICT equipment, the Fujitsu Group has positioned energy efficiency and resource efficiency as two critical themes of the Fujitsu Group Environmental Action Plan (Stage VII). As we move forward with efforts to develop environmentally conscious products, our goals in these areas are to "achieve top-level energy efficiency*8 for 50% of newly developed products" and "increase resource efficiency of newly developed products by 20% compared to 2011."

*8 Top-level:

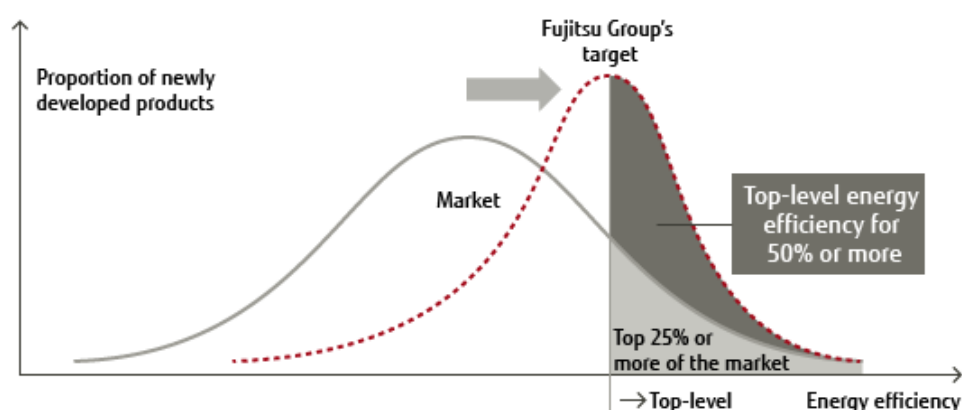
Achieve more than 25% of market benchmark in energy efficiency such as top-runner products (first in the world or industry, top of the world or industry).

Development of Products Leading the Way in Energy Efficiency

The Fujitsu Group in developing new products over the FY 2013-2015 period will contribute to the lowering of environmental burden when products are in use. We will do this by continuously expanding the number of our products that are top-level performers in terms of energy efficiency.

We have established standards for recognizing top-level energy efficiency - in comparison to either the market or past products - by product group. Our aim is to clear these standards for 50% or more of the product series we develop over the three years ending with FY 2015. Products that clear their respective standards will be recognized as "Top-level Energy Efficiency Products." In setting target standards, we emphasized comparability and transparency, and adopted standards that were as open as possible to public awareness.

Development of Top-Level Energy Efficiency Products



Improving the Resource Efficiency of New Products

The Fujitsu Group believes it is important to improve the efficiency of resource usage and pursue product development that uses the least amount of resources possible. We, therefore, have redefined "resource efficiency" as an indicator for quantitatively evaluating the extent to which environmental burden, due to the use of resources in products and the disposal of products, has been lowered. The specific goal we aim to achieve by FY 2015 is to increase resource efficiency per product newly developed by Fujitsu*9 by 20% compared to FY 2011.

Resource efficiency is evaluated by dividing the value of a product, by the environmental burden (in terms of use and disposal) of the elements (resources) comprising the product (Refer to the diagram below.) As we pursue development focused on reducing resource usage, we will continue to consider the roles product value, resource burden coefficient, and resource disposal volume in improving our resource efficiency indicator.

*9 Products newly developed by Fujitsu:

Excludes products for which resource efficiency would be determined by customer specifications or standards.

Calculating Resource Efficiency

$$\text{Resource efficiency} = \frac{\text{Product value}}{\begin{array}{c} \text{Environmental burden} \\ \text{from resource usage} \\ || \\ \Sigma (\text{Resource burden coefficient} \times \\ \text{Resource usage volume}) \end{array} + \begin{array}{c} \text{Environmental burden} \\ \text{from resource disposal} \\ || \\ \Sigma (\text{Resource burden coefficient} \times \\ \text{Resource disposal volume}) \end{array}}$$




Product value	To place emphasis on the valuation of reductions 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 improvement)
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.
Resource disposal volume	Mass of each resource disposed of (not reused) in connection with a post-use product. Activities will begin with this figure set to a value of "0."

Reducing Chemical Substances in Products

We cooperate with our business partners in striving for strict management of chemical substances whose use is restricted by laws and regulations in Japan and overseas, as well as of other potentially harmful substances.

Management of Legally Prohibited and Regulated Chemical Substances in Products

The Fujitsu Group designates substances that are harmful to people and the environment and whose use is either prohibited or regulated by law as "Fujitsu Group Specified Banned Substances." We use both Japanese and overseas regulations to determine what substances to include on this list. The "Fujitsu Group Specified Banned Substances" list is comprised of two categories - one for substances commonly prohibited throughout the world and another for substances prohibited in certain countries or regions.

-  [Fujitsu Group Specified Banned Substances](#) [145KB]
-  [Fujitsu Group Specified Reportable Substances](#) [150KB]
-  [Fujitsu Group Specified Controlled Substances](#) [65KB]

We have also established a Fujitsu Group Green Procurement Direction and strengthened control of the chemicals in our products by taking the initiative in directing our suppliers to construct chemical management systems (CMSs). By excluding banned substances through green procurement activities, we are providing products free of Fujitsu Group Specified Banned Substances.

- [Green Procurement](#)

In response to regulations such as the RoHS Directive^{*1}, we have taken systematic action covering the entire supply chain by constructing a system headed by our product business division and including our quality assurance, purchasing, and environmental divisions, to manage chemical substances from design through to delivery. In FY 2012, we revised our internal systems to comply with the CE marking^{*2} requirements of the revised RoHS Directive. We changed them from the previous configuration, based on internal standards, to systems suited to standards consistent with the RoHS Directive. As a result, we were in compliance with the revised RoHS Directive, including CE marking provisions, when the revised directive came into effect.

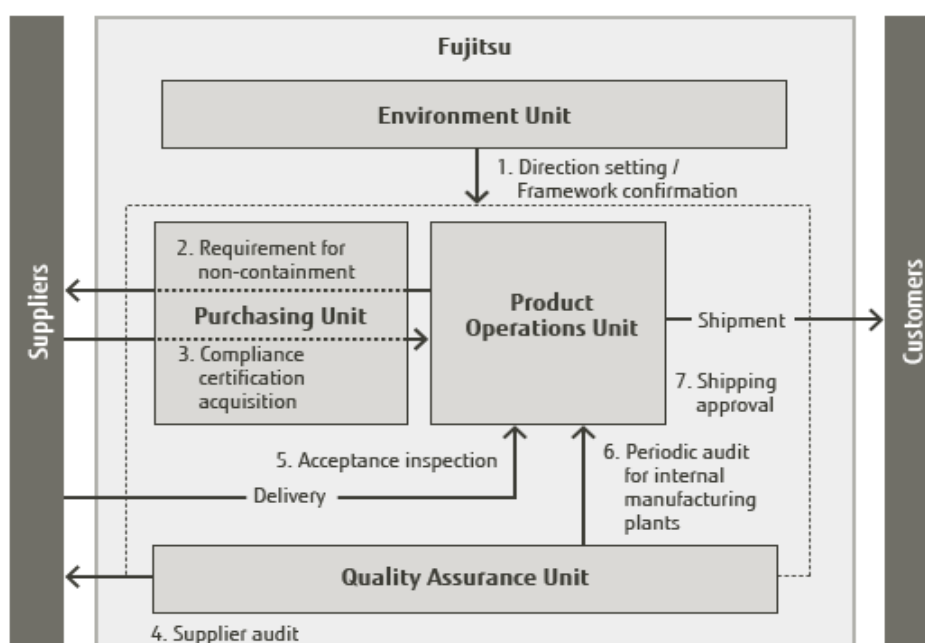
*1 RoHS Directive:

Restriction of the use of certain hazardous substances in electrical and electric equipment

*2 CE marking:

Mark that is applied to products to show they are in compliance with the safety requirements of EU (EC) directives.

Framework for RoHS Directive Compliance



Controlling Substances of Concern

The Fujitsu Group sees the minimization of risk associated with specified chemical substances as a high priority for protecting the safety of customers. Therefore, when we have concerns about the harmfulness of substances, we designate them as Fujitsu Group Specified Controlled Substances or Fujitsu Group Specified Reportable Substances, even if they have not been scientifically shown to be harmful. Based on the principle of prevention, we manage our use of chemical substances in a way that allows us to ban their use immediately if it becomes clear they are harmful.

The Fujitsu Group Specified Reportable Substances list includes substances that are REACH regulation^{*3} candidate substances^{*4}, and we collect information on substance amounts from suppliers and then manage these quantities on a per-product basis. Moreover, the Specified Controlled Substances list also includes data from suppliers on amounts for substances that may not be restricted by every country's regulations, but which we consider to be of concern.

As far as PVC is concerned, we not only control the amounts included in our products but also require in our Green Procurement Direction that it be used as little as possible, and restrict its use in everything except sheathing for cables and insulating materials for electronic components.

^{*3} REACH regulation:

Regulation concerning the Registration, Evaluation, Authorization, and Restriction of Chemicals

^{*4} REACH candidate substances for Authorization:

Selected chemical substances with properties (carcinogenicity, mutagenicity, reproductive toxicity, etc.) regulated by REACH. If these substances are present in products, data on the amounts must be displayed.

Case Study

The ESPRIMO Q920, with Halogen-Free Parts

The ESPRIMO Q920, with its compact design incorporating an onboard power supply, is an extremely energy-efficient desktop computer.

It is also, however, distinguished by the reduced level of chemical substances that go into its manufacture. It uses a halogen-free mainboard - technology Fujitsu has been actively developing over the years - cable insulation and plastic fan parts that include no PVC, and other parts made from materials we have worked to ensure are environmentally conscious. We even offer customers the option of using a PVC-free power cable.



ESPRIMO Q920

Contributing to Creating Mechanisms for Chemical Substance Management

In the Fujitsu Group, we see efforts towards chemical substance management as an issue for the whole supply chain and so participate in activities such as the Joint Article Management Promotion consortium (JAMP) to contribute to the design, construction and widespread adoption of mechanisms that can transmit information effectively.

Among these industry groups, we were involved from the planning stages with the input format and entry support tools for the AIS (article information sheet), which is an included chemical substance information transmission sheet, and also participated in creating guidelines for appropriate management of included chemical substances and in practical education for business partners to promote the use of AIS throughout the industry. Furthermore, we are energetically engaging in activities promoting the use of the JAMP information distribution infrastructure (JAMP-IT), which supports information exchange requests from multiple companies to create an environment for the smooth transmission of information.

The Fujitsu Group, through its AIS usage, is identifying and managing information on whether and how particular chemical substances are being used in particular products. These substances include not only those covered by REACH regulations but also substances that have been put on the Fujitsu Group Specified Controlled Substances list because there are concerns they may be harmful. Moving forward, we aim to help minimize the significant adverse impact of chemical substances on people and the environment by finding alternatives for procured products containing chemical substances recognized as harmful based on AIS data on chemical substances included in procured products.

Using ICT to Control the Chemicals in Our Products

From requesting surveys by outside organizations through to gathering information by our own efforts, the Fujitsu Group maintains an integrated system for managing the information on the chemicals contained in the components and materials it purchases from its suppliers throughout its supply chain. Further, we use the large volumes of chemical-related data we collect to calculate amounts on a per-product basis, pinpointing the amounts of designated chemicals at the product level and managing them accordingly.

The Group also offers an environmental business solution called PLEMIA/ECODUCE, a software package that utilizes this in-house expertise.

- [The PLEMIA/ECODUCE website \(in Japanese\)](#)

Product Recycling

We are advancing collection and recycling of end-of-life ICT products from a global perspective to help create a recycling-minded society.

Recycling Activities that Conform to the Concept of Producer Responsibility

In accordance with the concept of Extended Producer Responsibility (EPR^{*1}), under which the producer's responsibility for its products is not limited to the product design and manufacturing stages but extends to the disposal and recycling stages as well, 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. We also try to do as much collection, reuse and recycling as we can even in countries where recycling is not obligatory, in line with the concept of Individual Producer Responsibility (IPR), which sees each producer as responsible for its own products.

IPR is a major challenge for the Fujitsu Group in expanding its 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.

^{*1} EPR:

Extended Producer Responsibility. This concept was made explicit in Japan's Fundamental Law for Establishing a Sound Material-Cycle Society enacted in June 2000.

Targets and Achievements in Stage VI of the Environmental Protection Program

Targeting a sustained 90% resource reuse rate^{*2} of business ICT equipment globally at Fujitsu recycling centers, in FY 2012 we achieved a rate of 94.3% (91.5% within Japan and 99.2% overseas). This target remains in effect in the Fujitsu Group Environmental Action Plan(Stage VII).

^{*2} Resource reuse rate:

The ratio of the amount (by weight) of recycled parts and resources to the amount of end-of-life business ICT products processed.

Promoting product recycling efforts in Japan

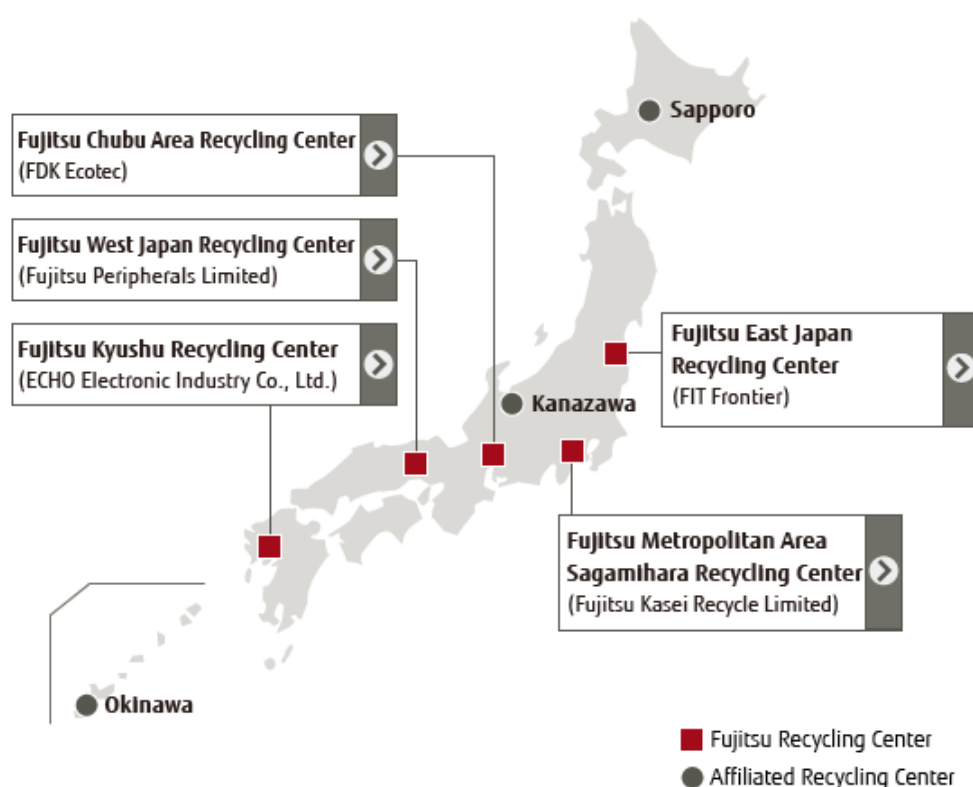
As an enterprise with official designation for wide-area industrial waste disposal in Japan, Fujitsu engages in various kinds of contracts for accepting industrial waste for appropriate processing.

We have established Fujitsu recycling centers throughout Japan to create a nationwide recycling system. This system provides for rigorous traceability and security, and achieves a high resource reuse rate. By providing this safe and secure service, we are fully discharging our Extended Producer Responsibility (EPR).



Wide Area Industrial Waste Disposal Certificate

Fujitsu Recycling Centers Throughout Japan



Achievements in Collecting and Recycling End-of-Life ICT Products

Although the volume of materials collected is declining due to progress in miniaturization and reduced product weights, we processed 5,297 tons of recycled ICT products from corporate customers (used ICT products for business applications) in FY 2012, and achieved a resource reuse rate of 91.5%. Also, we have now collected a total of 85,381 end-of-life PCs from individual customers.

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

FY	2009	2010	2011	2012
Resource reuse rate	90.8%	90.6%	90.9%	91.5%

Providing Product Recycling Information

In order to properly dispose of end-of-life ICT products, since FY 2004 Fujitsu has been operating a digital management system for its product disassembly manual.

Through this system, Fujitsu recycling centers can download from our website, as animated disassembly manuals, all the information they need to recycle products. The system also provides instructions on how to deal with items containing restricted chemical substances and plastic materials, and with products that contain customer data.

Promoting Recycling

Experienced workers carefully disassemble collected products by hand and separate the materials into categories such as steel, copper, aluminum, precious metals, glass and 20 different types of plastic. They also strive to raise their manual disassembly standards through the use of animated disassembly manuals. Materials recognition equipment has been introduced for plastics that are difficult to discriminate, so as to allow the complete segregation of different types of plastic. In addition to minimizing the quantity of waste materials in this way, we are continually trying to recycle resources that can be reused to make products.



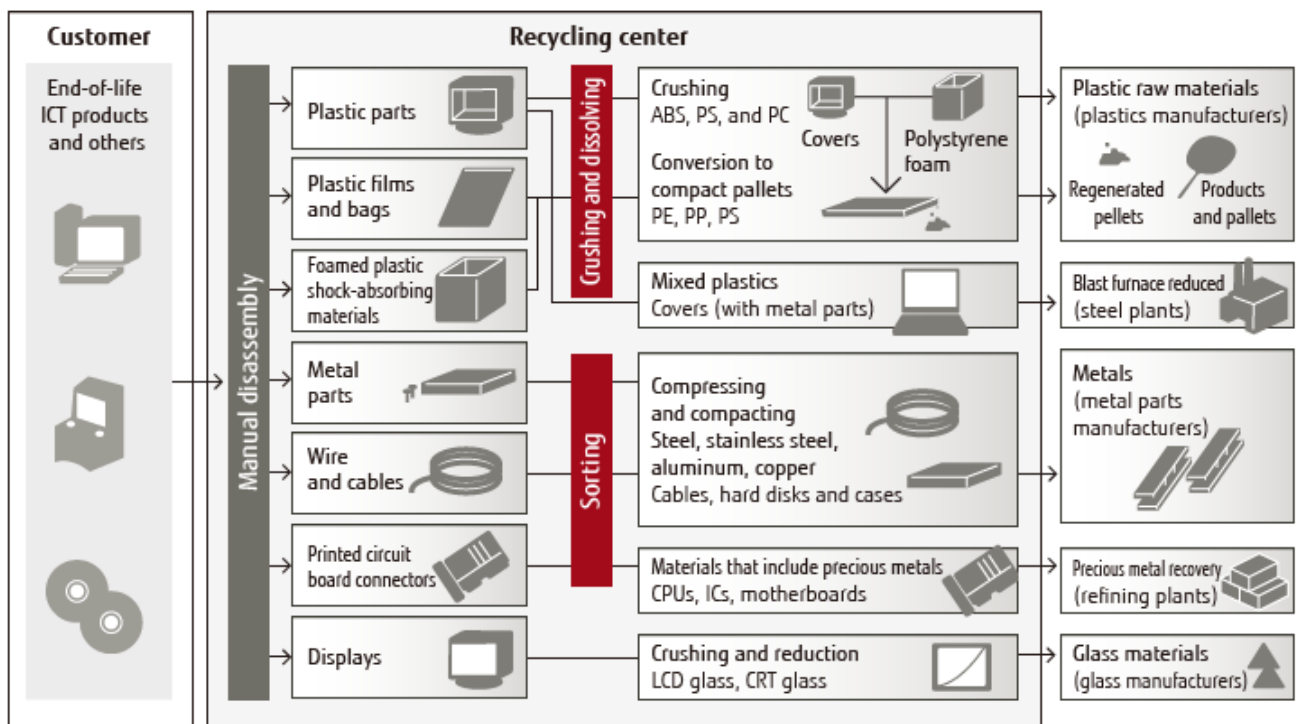
Plastic material identification equipment



Ballpoint pens and folders made from recycled plastic

Also, to keep our customers informed of these initiatives, we distribute ballpoint pens and folders made from recycled plastic at exhibitions and other events, as well as demonstrating PCs being manually disassembled.

Fujitsu Integrated Recycling Process



Developing a Traceability System

We developed an integrated recycling information management system and since FY 2007 have adopted it at the Fujitsu recycling centers.

Using this system prevents theft and illegal dumping by attaching barcodes to customers' ICT products and managing data on the history of the recycling process from acceptance at the recycling center through disassembly and destruction of the hard disks on a per-customer basis.



Integrated Information Management System for Recycling

Operation of Security Systems

A high level of security is maintained at Fujitsu Recycling Centers by using infrared cameras to monitor automatically for intruders and check the storage status of the accepted products.



Security system



Security camera monitoring system

Providing services to customers

We provide recycling services for our customers.

- [ICT product disposal and recycling \(in Japanese\)](#)

Promoting Product Recycling Overseas

The Fujitsu Group recycles products in EMEA (Europe, Middle East, Africa), the Americas (the United States, Canada, and Brazil) and Asia (Singapore, the Philippines, Australia, Hong Kong, Taiwan, and South Korea).

In addition, through its partner companies, Fujitsu Technology Solutions (Holding) B.V. (FTS) recycles waste ICT products for corporate and individual customers in 27 countries in the EU, as well as in Norway and Switzerland. In addition, since 1988 at Paderborn, the Group's own recycling center in Germany, we have been contributing to the reuse of waste resources by disassembling products by hand so we can precisely classify and then appropriately recycle the materials. In FY2012, we processed 2,901 tons of waste ICT products and achieved a resource reuse rate of 99.2%.

Also at other overseas sites we have linked up with local recycling partner companies and promoted the recycling of ICT products.

- **Singapore: Fujitsu PC Asia Pacific Pte. Ltd. (FPCA)** (from 2007)
- **Brazil: Fujitsu do Brazil Ltda. (FBR)** (from 2010)
- **Australia: Fujitsu Australia Ltd. (FAL)** (from 2006)
- **South Korea: Fujitsu Korea Ltd. (FKL)** (from 2003)

Environmental Labeling and Information Disclosure

We will actively disclose environmental information about our products to customers.

Disclosure of Environmental Information on Products

We actively disclose environmental information on our products, both via the Internet and in the form of environmental labels.









Since the end of FY 2006, we have registered notebook PCs under the EPEAT (Electronic Products Environmental Assessment Tool) system, which encourages the purchase of green PCs and is used chiefly by US government bodies. In Japan, we disclose on the website given below information on products that conform to the International Energy Star Program in Japan or the PC Green Label Specification, as well as products registered under the EcoLeaf Program or certified under the Eco Mark program.

- [EPEAT website](#): Information on the US Institute of Electrical and Electronics Engineers' (IEEE) EPEAT standard.
- [International ENERGY STAR Program website](#): Information on products conforming with the International ENERGY STAR Program in Japan
- [List of PC Green Label System-compliant products \(In Japanese\)](#): Information about Fujitsu Products in compliance with the PC Green Label System formulated by Japan's PC3R Promotion Association
- [List of registered EcoLeaf label products \(In Japanese\)](#): Information about Fujitsu products that have obtained the "EcoLeaf" label developed by the Japan Environmental Management Association for Industry.
- [List of products with Eco Mark certification \(In Japanese\)](#): A list of Fujitsu products that are certified with the Eco Mark distinction developed by the Japan Environment Association

Environmental Labeling

The main environmental labels displayed by the Fujitsu Group.

The main environmental labels displayed by the Fujitsu Group

<p>International Energy Star program</p> <p>The International Energy Star Program label is displayed on computers (PCs, workstations), displays, printers, and scanners registered with the program.</p> <ul style="list-style-type: none"> • International Energy Star Program 	
<p>Energy Efficiency Labeling System</p> <p>This label is displayed on products meeting standards prescribed by Japan's Act on the Rational Use of Energy.</p> <ul style="list-style-type: none"> •  Energy Efficiency Labeling System [171KB] 	
<p>PC Green Label System</p> <p>For PCs, Fujitsu displays this mark on products meeting standards stipulated by the PC3R Promotion Association.</p> <ul style="list-style-type: none"> • PC3R Promotion Association 	
<p>EcoLeaf Environmental Label (Japan Environmental Management Association for Industry)</p> <p>In May 2003, Fujitsu notebook PCs were the first in Japan to be certified under this label.</p> <ul style="list-style-type: none"> •  Japan Environmental Management Association EcoLeaf Environmental Label [176KB] 	
<p>Eco Mark (Certified by the Japan Environment Association)</p> <p>In January 2001, Fujitsu desktop PCs became the first in Japan to receive certification. At present, certifications have been obtained for both PCs and printers.</p> <ul style="list-style-type: none"> • Japan Environment Association Eco Mark 	
<p>Green Policy Innovation Logo</p> <p>The Fujitsu Group's own environmental label. The Group displays this logo on Green and Super Green products, which are especially eco-friendly.</p> <ul style="list-style-type: none"> • Green Policy Innovation logo 	

Solutions that Benefit the Environment

By stepping up the certification of Environmentally Conscious Solutions, we are working globally to provide solutions that reduce the environmental burdens of our customers and society.

Our Approach

To reduce the amount of greenhouse gas emissions on a global scale, efforts will be needed not only to reduce power consumption and to develop environmental technologies, but to profoundly alter the way people live and work. ICT is indispensable to achieving these innovations, and it will be critically important to take full advantage of such ICT in the future.

The Fujitsu Group sees ICT as a way to reduce environmental burden - what we think of as "Green by ICT" - and is, therefore, committed to help lowering the environmental burden of society as a whole by moving forward with the provision of cutting-edge green ICT on a global basis.

Initiatives in FY 2012

Advancing Recommendations for Resource Savings in addition to Electricity Conservation, Energy Savings and CO2 Emissions Reductions

In FY 2012, we responded to changing customer needs by adding "ICT-based reductions in resource usage" to "CO2 emissions reduction" and "ICT-based electricity conservation and energy savings" as ICT solutions we offer to our customers.

Increasing the Certification of Environmentally Conscious Solutions

While the adoption of ICT solutions entails power consumption to operate servers and computers, such solutions can also reduce the impact on the environment by eliminating paper use and reducing the movement of people and goods for more efficient use of office and warehouse space.

At the Fujitsu Group, we have assessed the quantitative reduction in environmental burdens (in terms of reduced CO2 emissions) from ICT adoption using an environmental impact assessment method developed by Fujitsu Laboratories Ltd., and we certify products and services that exceed the required standard as Environmentally Conscious Solutions.

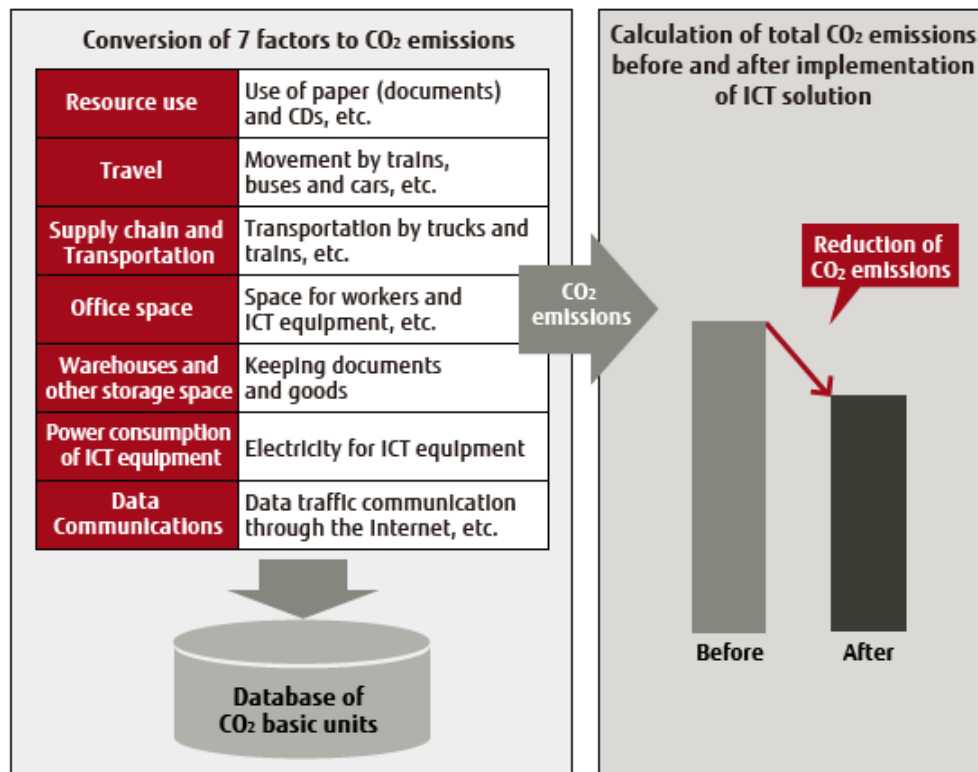
In FY 2012, we enhanced support aimed at increasing the number of Environmentally Conscious Solutions certified. This resulted in 43 new solutions being certified, bringing the total to 301 for the period FY 2004 through FY 2012. In FY 2013, we intend to continue expanding the scope of certified products and services and will consider program revisions, such as establishing standards from perspectives other than just CO2 emissions reduction.

Environmental Impact Assessment Method

We analyze environmental impact reductions produced by ICT solutions by classifying the implementation effects into seven categories: resource use, travel, supply chain and transportation, office space, warehouse space and other storage space, power consumption of ICT equipment and data communications. The benefits are converted into CO2 emissions using CO2 basic units (CO2 conversion coefficient) developed by Fujitsu. CO2 emissions from before and after ICT solution implementation are calculated and compared, and reduction effects are evaluated accordingly.

This approach accords with assessment guidelines published by Japan's Ministry of Economy, Trade and Industry and Ministry of Internal Affairs and Communications, and with methods (L.1410) recommended in March 2012 by the International Telecommunication Union (ITU).

Overview of Environmental Evaluation Method



- [International Standardization of Methodology for Environmental Impact Assessment of ICT Goods, Networks and Services \[Press Release\]](#)

Global Efforts

In order to globally promote solutions that contribute to reducing environmental burdens, we began in FY 2010 to perform evaluations based on the Environmentally Conscious Solutions certification system overseas as well. We have since completed informing overseas representatives about the assessment method and construction of the evaluation system itself. A remote medical system in Laos and other technologies have already been assessed under the system.

Promoting Visualization of Environmental Burden Reduction Effects from Customer ICT Utilization

In order to promote environmental impact reductions from ICT utilization, it is important that customers using ICT solutions understand how and how much they contribute to the environment. From this perspective, the Fujitsu Group makes it possible to see how ICT solutions reduce environmental impact and actively proposes this type of visibility to customers.

Aiming to further increase the number of proposals we make, we moved forward with three initiatives in FY 2012. The first was to create the environmental solution proposal manual to help sales personnel in their efforts to make proposals that result in lower environmental burden.

Next, we held around 50 training sessions for sales personnel and SEs working in sales offices and Group companies throughout Japan. The purpose of this training, which was conducted for over 1,000 participants, was to enhance abilities to win support for proposals. Training covered usage of the EcoCALC system for estimating environmental contributions, in terms of CO2 emission reductions, energy savings, and cost reductions, from the adoption of an ICT solution. It also showed participants how to incorporate ICT-based reductions of environmental burden and the use of environmental labels in proposals, and gave examples of outstanding environmental solution proposals.

The third initiative we undertook in FY 2012 was to establish a help desk to support proposal development. Through this helpdesk, we implemented support in the form of research on electricity consumption by systems, calculation of CO2 reductions and electricity savings, and assistance with the preparation of proposal documents. Sales personnel can now contact the help desk for various kinds of advice and information on prior cases, and this has accelerated the proposal development process.

As a result of the three initiatives, the number of environmental burden reduction proposals made in FY 2012 grew by 60%, compared to FY 2011, and proposals were made to customers in nearly all industries.

As an initial step in expanding the offering of proposals for reducing environmental burden to a global scale, we began operating EcoCALC in the U.K. as a pilot project in January 2013. Our goals for FY 2013 are to begin operating EcoCALC on a global scale in earnest and to further expand ICT-based contributions to the lowering of environmental burden. We aim to do the latter by actively searching for cases in which EcoCALC was adopted and communicating information on them both inside and outside Fujitsu.



EcoCALC pilot project launched in January 2013.

Case Study

Fujitsu's Global Cloud Platform Wins Environmental Awards

The FUJITSU Cloud IaaS Trusted Public S5 provides customers with network access to server, storage, network, and other ICT infrastructure at Fujitsu datacenters. This allows customers to avoid building their own ICT infrastructure and to use only what they need, when they need it. After introducing them in Japan in October 2010, Fujitsu began offering IaaS Trusted Public S5 services in Australia, Singapore, the U.S., the U.K., and Germany in June 2011. On a global basis, IaaS Trusted Public S5 services have led to major reductions in energy usage, reduced CO2 emissions by around 30,000t per year, and freed up physical space for customers.

In recognition of the reductions in energy consumption they have helped to bring about across the globe, IaaS Trusted Public S5 services were named the winner of the Commerce and Information Policy Bureau Director-General Award in the "Savings in Society's Energy Consumption by IT" category of the Green IT Awards 2012 sponsored by Japan's Green IT Promotion Council, and supported by the Japanese Ministry of Economy, Trade and Industry, in October 2012. One month later, IaaS Trusted Public S5 services also received the Chairperson's Award, Eco-Products Awards Steering Committee, in the Eco-Services Category at the 9th Eco-Products Awards, sponsored by the Eco-Products Awards Steering Committee, and supported by Japan's Ministry of Finance, Ministry of Health, Labour and Welfare, Ministry of Agriculture, Forestry and Fisheries, Ministry of Economy, Trade and Industry, Ministry of Land, Infrastructure, Transport and Tourism, and Ministry of the Environment.

- [Fujitsu Deploys Six-Country Global Cloud Platform \[Press Release\]](#)
- [Fujitsu Public Cloud Service Wins Green IT Award \[Press Release\]](#)
- [Fujitsu Public Cloud Service Wins Chairperson's Award at Eco-Products Awards 2012 \[Press Release\]](#)

Case Study

Financial Services Business Group Vigorously Working to Propose Solutions that Reduce Electricity Consumption and Save Energy

In FY 2011, Fujitsu's financial services business group completed the development of a tool that simplifies the calculation of electricity consumption reductions from upgrades of servers, storage, network, and other ICT platforms, and began promoting its use within the business group. In FY 2012, it worked with Group companies to create a template for creating proposals that pay particular attention to energy-saving impacts and other environmental points relevant for ATM systems, palm-vein authentication devices, and other such products. This template was put to work in business negotiations throughout Japan. The business group also made it a point to discuss best practices in regular monthly meetings involving Group companies. It worked to get other units to adopt these best practices and endeavored to invigorate proposal activities, as well. These initiatives succeeded in increasing the number of environmental solution proposals by a factor of 3.3 compared to the result for FY 2011.

- [Solutions that Benefit the Environment : Case Study Archives](#)

Fujitsu Group Environmental Action Plan(Stage VII) Environmental Solution Targets

GHG Emission Reduction through the Provision of ICT

As part of the Fujitsu Group Environmental Action Plan (Stage VII), we have promised to help lower the greenhouse gas (GHG) emissions of our customers and society by providing ICT solutions. Our target is to achieve a reduction of 26 million tons - 16 million in Japan and 10 million overseas - over the three-year period of FY 2013-2015. This target constitutes a global expansion of the Fujitsu Group Environmental Protection Program (Stage VI) target of reducing CO2 emissions by customers and society by a total of 15 million tons or more through the provision of green ICT over the four-year period of FY 2009-2012.

Calculating environmental impacts from the introduction of ICT, however, is not easy. Fujitsu, therefore, has evaluated the CO2 emission-lowering impacts in around 300 prior cases in which customers implemented Fujitsu's environmental solutions. Furthermore, by calculating base units (CO2 emission reduction per monetary unit of sales) for each environmental solution, we made it possible to measure various potential emission reductions. Calculations of annual reduction contributions under the Fujitsu Group Environmental Action Plan(Stage VII) will now be performed by multiplying the annual sales figures for individual solution categories by the appropriate base unit figure.

We established our current GHG emission reduction target based on a calculation approach that uses multiple years of actual results, and that we are confident leads to accurate results. We are also, however, an active participant in an initiative aiming to define an international calculation method within the next 1-2 years. Going forward, we will continue to revise and improve the accuracy of our calculation approach based on accumulated knowledge and experience, and work to establish compatibility with the international standard to be determined.

- [Cooperation with External Organizations](#)

Provision of Sustainability Solutions

Until now, our goal has been the provision of environmental solutions focusing on the reduction of CO2 emissions. However, given recent energy conditions and social developments, we have expanded the definition of "solution" to include saving energy, saving resources, preventing environmental pollution, and conserving biodiversity - areas in which we can contribute to global sustainability under the Fujitsu Group Environmental Action Plan(Stage VII). Moving ahead, we will work to expand the provision of solutions that contribute to the resolution of these social concerns.

VOICE

Alison Rowe

Global Executive Director Sustainability International Business FUJITSU LIMITED

Information, Communications and Technology (ICT) is pervasive in every industry and every country and is critical for our future and for society. Our ambition is to reduce 26million tons of greenhouse gas emissions for our customers and society between April 2013 and March 2016, through rapidly deploying sustainability solutions globally at scale. We will provide solutions that enable massive improvements in resource and energy efficiency, enhance of quality of life and protect our environment. Our solutions will include top ranking energy efficient products, deployed on secure and flexible platforms, hosted in our sustainable data centers around the world. We will continue to consult with our customers and support them in achieving efficiency and resilience throughout their operations and supply chain to shape a sustainable future.



Providing Environmental Solutions

We provide solutions that support implementing and improving environmental management so that our customers can achieve both business growth and reduced environmental burdens.

Our Approach

In the context of increasingly severe environmental problems, our customers must promote environmental management that aims at achieving business growth and reductions in environmental burdens. Both are essential if they are to conduct sustainable business.

We at Fujitsu provide environmental solutions to support our customers' environmental management. We evaluate their environmental activities and allow them to visualize what can be improved in an integrated manner from a management standpoint. We propose measures that resolve environmental issues in a way that conforms to our customers' business strategies. Furthermore, our efforts are not limited to evaluating the current situation and proposing measures; we also support continuously increasing the level of our customers' environmental management by iterating the PDCA cycle.

Initiatives in FY 2012

In FY 2012, Fujitsu began to provide new services based on internally developed know-how. One example is the Environmental Management Dashboard, which we provide in a form adapted to aggregate and process each customer's management and environmental data. In addition to providing new services, we also worked to promote the Fujitsu Sustainability Solution Eco Track (an SaaS-based environmental management information service), the capabilities of which extend from the collection and tabulation of data, to the preparation of reports.

Case Study

Providing Internally Developed Know-How as Services

Fujitsu has implemented cutting-edge green ICT internally, and accumulated a wealth of experience and know-how as a result. A prime example is the Environmental Management Dashboard. We developed this tool to provide real-time visual representations and forecasts of electricity usage and CO2 emissions at all of our business sites. Once we began to use the Environmental Management Dashboard internally, in 2011, we realized enormous benefits in terms of measures for saving electricity and other forms of energy. We therefore decided to launch the Environmental Management Dashboard service in FY 2012 and some companies have decided to implement it in their operations.

Meanwhile, in the management of chemical substances used in products, we used know-how we have developed for identifying and properly responding to global regulatory trends to launch a new service in April 2013. This service provides information on the regulation of chemical substances in products and has already been used on a pilot basis by SEGA Corporation.

Our plans for FY 2013 call for expanded provision of environmental solutions, with these services playing central roles.

- [Environmental Management Dashboard](#)
- [Fujitsu Launches Information Service for Chemical Substances Regulations \[Press release\]](#)

Case Study

Global Promotion of the "Fujitsu Sustainability Solution Eco Track" Environmental Management Solution

In Europe, laws and regulations, like the EU Energy Efficiency Directive, are being tightened, and this is requiring companies to undertake increasingly sophisticated environmental management initiatives. Fujitsu has responded to this need by offering environmental management solutions with which it has built a track record of success in Japan. These solutions, which are offered under the name "SLIMOFFICE" in Japan, are now being offered under the unified "Eco Track" global brand. The European launch of these services, and our ICT-based support of the environmental management efforts of companies there, began in German-speaking countries in April 2013.

Eco Track is a cloud-based service the capabilities of which extend from the collection and measuring of energy usage and other data from multiple business sites, to report creation. They can be easily used via a personal computer with an Internet connection and require no special expertise. At the moment, services are being offered in German and English, but we plan to accommodate other languages as well to meet the needs of multinational corporations.

At CeBIT2013, held in March in the German city of Hanover, Eco Track won the IT Innovation Award 2013 for the "Mittelstand" Initiative in the Green IT category. This award is presented to for innovative ICT products and solutions, and, in its selection, Eco Track was praised as a practical solution easily implementable and applicable particularly in middle-market companies.

- [FUJITSU Sustainability Solution Eco Track \(SaaS-based Environmental Management Information Service\)](#)

- [Providing Environmental Solutions : Case Study Archives](#)

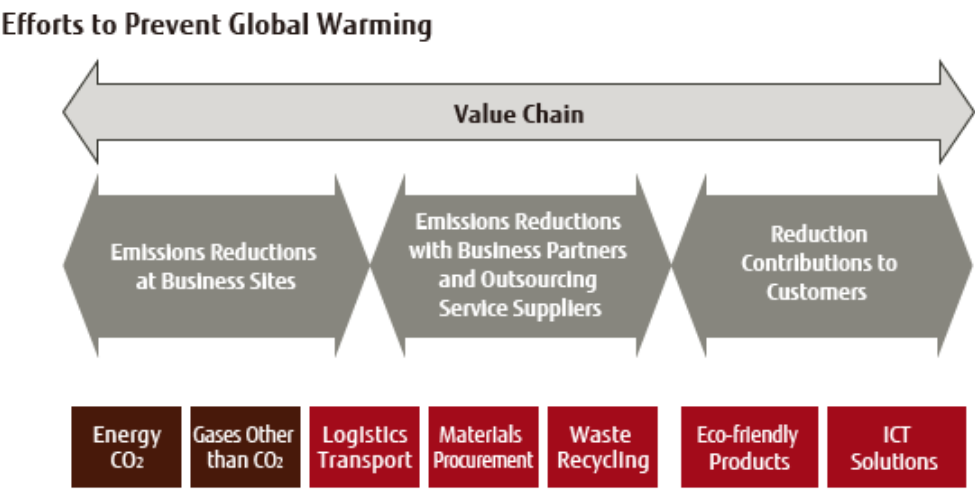
Efforts to Prevent Global Warming

We are examining all of our business operations in an effort to reduce greenhouse gas emissions--not only at our business sites but also in transportation and in the products and services we provide.

Basic Approach

We are working to reduce emissions of greenhouse gases associated with all our Group business activities. These actions include reducing emissions of CO2, due to energy consumption, and other greenhouse gases at business sites (our factories and offices), and reducing emissions associated with transportation.

Furthermore, we are working to prevent global warming throughout all areas of business activity by helping to cut greenhouse gas emissions from our customers and society in general by developing eco-friendly products that contribute to reducing environmental burdens and by providing ICT solutions.



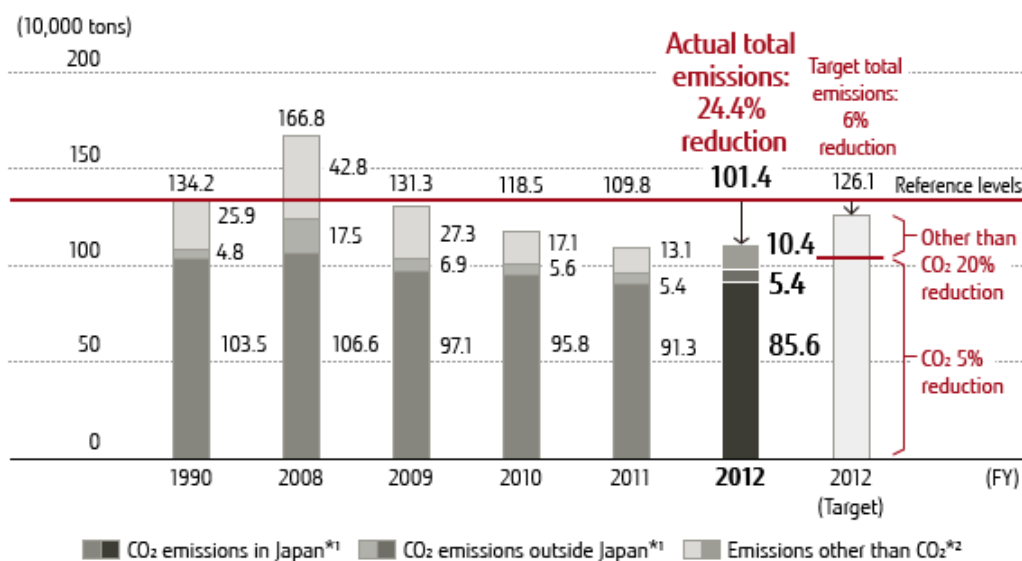
Preventing Global Warming from Business Sites

Greenhouse Gas Emission Reduction Targets and Results

We set "reducing our total greenhouse gas emissions by 6% by the end of FY 2012 compared with FY 1990 (the breakdown for total emissions is a 5% reduction in CO₂ due to energy consumption and a 20% reduction in gases other than CO₂)" as a goal of the Fujitsu Group Environmental Protection Program (Stage VI).

Our actual total global emissions for FY 2012, the final year covered by the Fujitsu Group Environmental Protection Program (Stage VI), were about 1.014 million tons (per unit of actual sales: 231.4 tons/billion yen), which is a 7.7% or 84 thousand ton reduction from the previous fiscal year, and a 24.4% reduction from FY 1990. At this level, we achieved our target under the Fujitsu Group Environmental Protection Program (Stage VI).

Trends in Total Greenhouse Gas Emissions



*¹ CO₂ emissions in/outside Japan: CO₂ conversion factor for purchased electric power has been calculated with a fixed value of 0.407 ton of CO₂ per MWh since FY 2002 for performance reports in our Environmental Protection Program.

*² Emissions other than CO₂: These are converted to equivalent amounts of CO₂ using the global warming potential (GWP) of each gas. Our FY 1995 performance is taken to be the emissions in FY 1990.

Reduction of CO2 Emissions due to Energy Consumption

CO2 emissions due to energy consumption are responsible for about 90% of the Fujitsu Group's greenhouse gas emissions. Therefore, we continuously work to improve the following energy-saving measures to reduce CO2 emissions.

- Energy-saving equipment, focusing on motive-power facilities (introduction of free cooling, inverters, energy-saving facilities, fuel conversion, etc.)
- Increased efficiencies through revised manufacturing processes, accompanied by proper motive-power facility operation and improvement of management
- Adjusting appropriate room temperature for office air conditioning, saving electricity for lighting and office automation equipment
- Promotion via measurement of energy consumption visualization and proactive use of that data
- Use of renewable energy such as solar power

Further, we set up our Low Carbon Committee at the corporate level in September 2008, establishing reduction targets for each business unit. Stronger measures to achieve these targets follow reforms to processes and equipment (in mounting, assembly and testing) and the development of new technologies. Moreover, our Capital Investment Guidelines define the economic and environmental criteria for investment as we identify and urgently implement priority measures. To address not only CO2 emissions reductions but also the energy supply and demand problems that have arisen following the Great East Japan Earthquake, and do so from a position of greater unity with management, we merged the Low Carbon Committee with the Environmental Management Committee in October 2012.

As a result of actions like those discussed above, our actual energy-consumption CO2 emissions for FY 2012 were about 910 thousand tons (856 thousand tons in Japan, 54 thousand tons outside Japan), which corresponds to a 57 thousand ton reduction from the previous fiscal year and a 15.9% reduction from FY 1990.

Case Study

Saving Energy by Shutting Down Datacenter Air Conditioning

Fujitsu's Kawasaki Plant operates a datacenter for internal shared service systems. In FY 2012, we performed a thermal fluid simulation with the ultimate aim of reducing electricity consumed for air conditioning.

This simulation was designed to determine whether shutting down air conditioning equipment would lead to the development of hot spots or an extreme temperature distribution. The most important characteristic of this simulation is that it can provide accurate data for an entire datacenter, which it would be impractical to test while in operation.

Through the simulation performed, it was determined that a total of eight internal datacenter air conditioners - seven during the first half of the year, and one during second half - could be turned off. Based on these results, we turned off air conditioners, took temperature readings, and confirmed that temperatures remained within tolerances. We expect that using fewer air conditioners will cut annual costs by 2.47 million yen and reduced annual CO2 emissions by 83.8 tons.

Case Study

Pursuing Energy Savings by Upgrading Lighting Facilities

Completed in August 1986, our Oita Systems Laboratory had been in use for around 25 years and its facilities had deteriorated from age. In FY 2012, therefore, we renovated it. With regard to lighting, in particular, we introduced Hf fluorescent and other high-efficiency fittings because of their longer useful lives and lower energy consumption, and installed a lighting control system enabling the adjustment of the amount of light used.

Once installation work was completed, in August 2012, we began to realize benefits, including a 9,423kWh reduction in monthly electricity consumption, annualized CO2 emissions lowered by 46 tons, and an annualized running cost savings of 1.792 million yen (based on average results through February 2013).

Renovation work also included an upgrade of the air conditioning system, which was completed in May 2013. This investment is expected to produce a 34% savings in electricity consumption, which we aim to verify in the lead-up to summer, when air conditioning will be in greatest demand.

Case Study

Saving Energy by Switching to Inverters for Cold and Hot Water Pumps

At the Kyushu R&D Center, we use cold water and hot water created at the plant to cool and heat the entire building. In fact, we use a system referred to as district heating and cooling to heat and cool tenant spaces, computer rooms, and other areas, as well. However, with increased use of personal computers, tenant heat burdens rose and the supply of hot water for heating in the winter became excessive. Furthermore, computer rooms had to be supplied with cold water for cooling even in winter, but pumping capacity, which was enough for the entire building, greatly exceeded this need.

In March 2013, therefore, we installed inverters on the cold and hot water pumps. These inverters made it possible to adjust operation of the cold water pump between 60Hz and 45Hz, and operation of the hot water pump between 60Hz and 30Hz. This ability to adjust pump speeds as needed has reduced our monthly electricity consumption by 32,176kWh, cut annual CO2 emissions by 160 tons (based on 0.407kg CO2/kWh), and slashed annual running cost by 6.55 million yen.

- [Reducing Greenhouse Gas Emissions Associated with Manufacturing : Case Study Archives](#)

Reducing Emissions of Greenhouse Gases other than CO2

Other than CO2, the Fujitsu Group mainly uses perfluorocarbon (PFC), hydrofluorocarbon (HFC) and sulfur hexafluoride (SF6) in its semiconductor divisions. Following the semiconductor industry's action plan (the Voluntary Action Plan: 10% reduction by the end of FY 2010 compared with FY 1995), we have set a target of a 20% reduction by the end of FY 2012 for the Fujitsu Group Environmental Protection Program (Stage VI). To this end, we have changed to gases with a lower global warming potential (GWP) and continued to install equipment to remove harmful materials in new and existing fabrication lines.

In FY 2012, we reduced the amount of these emissions measured in GWP equivalent by 27 thousand tons, to about 104 thousand tons. This corresponds to a 60.0% reduction compared to FY 1995.

Promoting the Use of Renewable Energy

We have adopted renewable energy sources such as solar power generation at our business sites, in the Fujitsu Group Environmental Protection Program (Stage VI), and we have set increased use of renewable energy as a new goal, and introduced the target of installing ten times as much capacity by the end of FY 2012 as we had in FY 2007.

In FY 2012, Fujitsu Isotec and Fujitsu's Oyama Plant both installed solar panels, the former with a total output of 20kW and the latter, 27kW. With these two additions, our total solar power generation capacity as of the end of FY 2012 had reached 655kW. With this figure at 11.9 times that for FY 2007, we achieved the Fujitsu Group Environmental Protection Program (Stage VI) target.

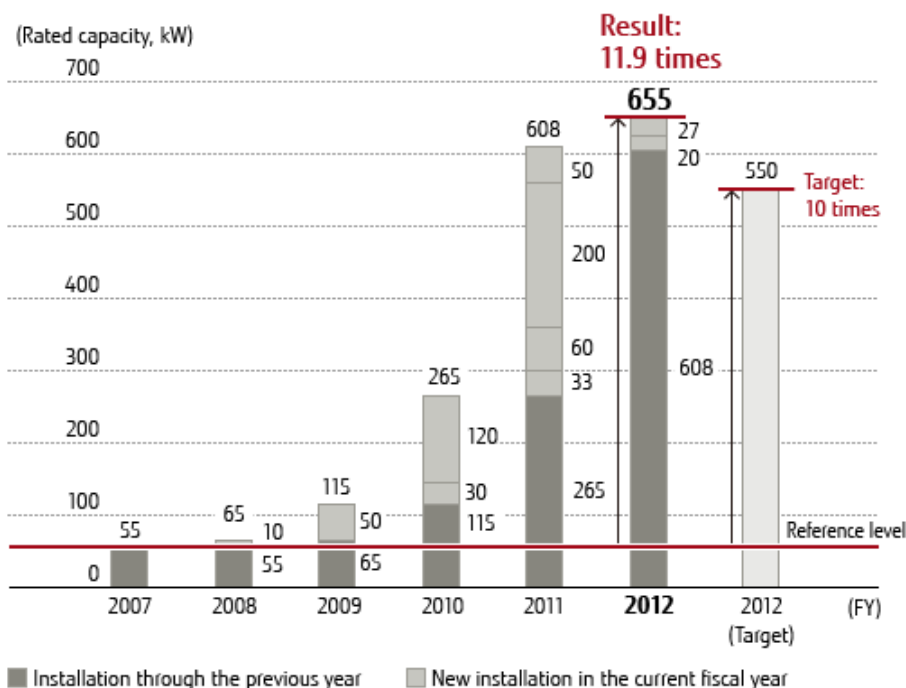


Solar panels at Fujitsu Isotec



Solar panels at Fujitsu's Oyama Plant

Cumulative Total Installed Solar Power Generation (renewable energy*)



*Renewable energy utilization ratio: Calculated based on the rated capacity of solar power generation equipment installed at Fujitsu business sites.

Responding to the Japanese Revised Energy Conservation Law

As a result of the revisions to and enforcement of the Japanese Energy Conservation Law^{*1}, business operators are now required to grasp their annual energy usage at all their business sites in Japan.

In the Fujitsu Group, we use the FUJITSU Sustainability Solution Eco Track (Fujitsu FIP Corporation) that grasps and tabulates the amount of energy we used across Japan, including for the office space we rent, and manages the amount used by each Group company. Note that the Fujitsu Group includes 26 companies that fall within the class of Specified Business Operators (businesses whose annual energy usage is in excess of 1,500 kl when converted to a crude oil equivalent value) newly stipulated in the revised law.

The amount of energy used by the Group within Japan under the Energy Conservation Law in FY 2012 was 561 thousand kl (crude oil equivalent), corresponding to CO2 emissions of about 1.145 million tons^{*2} based on the Act on Promotion of Global Warming Countermeasures^{*3}, which was also revised.

*1 Energy Conservation Law:
Act on the Rational Use of Energy.

*2 About 1.145 million tons:
There are differences in ranges for tabulation, which include tenants and calculations based on CO2 conversion factor for each electric power company, for results reporting under our Environmental Protection Program.

*3 Act on Promotion of Global Warming Countermeasures:
A system for calculating, reporting, and disclosing the amount of greenhouse gas emissions stipulated by Japan's Act on Promotion of Global Warming Countermeasures.

Electricity-Saving Initiatives

In preparation for the summer of 2012, businesses served by electric utilities other than the Tokyo Electric Power Company, Incorporated (TEPCO) and Tohoku Electric Power Co., Inc. were asked by the national government to meet quantitative targets (5%-15%) for reducing their electricity usage. In response, the Fujitsu Group's Power Conservation Committee (merged with the Environmental Management Committee from FY2012), chaired by Fujitsu's president, considered objectives and measures for plants and offices in working to set targets in line with government requests. We even went so far as to implement electricity-saving measures to the extent they would not impact operations at business sites served by the Tokyo Electric Power Company, Incorporated (TEPCO) and Tohoku Electric Power Co., Inc., the two utilities for which there were no quantitative target requests.

As a result of the measures taken, business sites served by the Kansai Electric Power Co., Inc. (KEPCO) reduced their electricity consumption during peak periods by a combined 24.4% and those served by the Kyushu Electric Power Co., Inc. reduced theirs by a corresponding 12.2%. Business sites served by other electric utilities also achieved the government-requested targets. Avoiding any impacts on its business activities, the Fujitsu Group continued to implement electricity-saving measures through the winter of 2012.

Saving Electricity with the Environmental Management Dashboard

All of the Fujitsu Group's business sites in Japan have implemented electricity saving measures using the Environmental Management Dashboard. The Environmental Management Dashboard examines electricity usage at each business site hourly, notes differences from targets, makes comparisons to the prior year's actual usage, and factors in weather data from 9:00AM of each day to forecast electricity demand for the day and display it in an easily understood format on the portal screen.



Electricity usage display screen

Case Study

Energy Management Project in FTS Augsburg

Fujitsu Technology Solutions GmbH has a development and production site in Germany Augsburg. In September 2012, the FTS Management location Augsburg committed to start the "Energy management project" in order to overcome increasing energy cost and to be an energy efficient factory. An energy management team and the necessary investment were approved.

Firstly we decided to establish energy management system in accordance with ISO50001 since third-party certification of this international standard is supposed to be important for coming EU and German legislation.

As one of requirement from ISO50001, we have defined following targets.

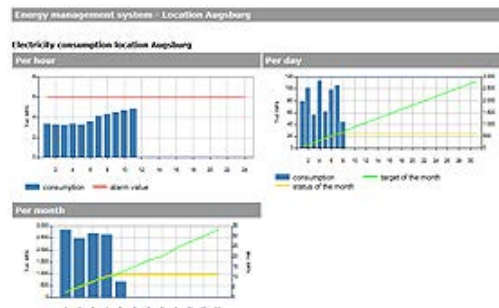
- CO2 emission reduction by 5% from the site in 3 years compared to 2011.
- Energy efficiency improvement by 10% for developed and/or manufactured products as PCs, Monitors, Workstations and Servers, in 2013 compared to 2012.

To realize those targets and accelerate activities, we thought that involvement of each employee was really important and that has been proceeding in 3 steps.

- Collecting ideas to save energy; 385 ideas were collected from employees.
- Implementation of ideas; most relevant ideas were realized concerning lighting, manufacturing or development facility and so on.
- Competition of each department to create new ideas, improve their behavior and save energy (to be realized in 2013)

Concerning electricity consumption, it's possible to confirm our effort through the electricity dash board which visualizes hourly, daily and monthly electricity consumption.

While advancing energy saving activities, we are continuing to develop our energy management systems in terms of energy policy, documentation, performance indicators, and measurement. We will obtain a third-party ISO50001 certification in the near future.



Electricity Dash Board

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

For the Fujitsu Group Environmental Action Plan (Stage VII), we have established the following three targets to be achieved by FY 2015. These targets are based on environmental policies and directions inside and outside Japan, and the Fujitsu Group's business forecasts. Going forward, we will continue to implement, and strengthen, initiatives for achieving these targets.

- Reduce greenhouse gas emissions in our business facilities by 20% compared to 1990.
(Raised to a reduction of 20%, from the 6% target of the Fujitsu Group Environmental Protection Program (Stage VI))
- Improve energy intensity in our business facilities over 1% each year.
(New targets that are consistent with Japan's Revised Energy Conservation Law and the Action Plan of the Industries of Electrical and Electronics on a Low Carbon Society^{*4})
- Increase generation capacity and procurement of renewable energy.
(Move forward with the installation of photovoltaic and other power generation facilities, and the procurement of green electricity and other forms of renewable energy.)

^{*4} Action Plan of the Industries of Electrical and Electronics on a Low Carbon Society:

An action plan formulated to reduce CO2 emissions in the electrical and electronics industries, based on Nippon Keidanren's Commitment to a Low Carbon Society, a voluntary industry initiative. The plan outlines major initiatives beginning in FY 2013 and establishes energy intensity improvements to be achieved by FY 2020.

GHG Emissions Report based on GHG Protocol Standards^{*5}

Upstream (Scope 3)

Category	Tons	Notes on Reduction Initiatives
Purchased goods and services	1,945,000	Eco-Friendly Products Reference
Capital goods	19,000	-
Fuel and energy-related activities not included in Scopes 1 and 2	79,000	-
Transportation and distribution (Upstream)	Not covered	-
Waste generated in operations	9,000	-
Business travel	Not covered	-
Employee commuting	Not covered	-
Leased assets (Upstream)	119,000	-

Reporting company (Scopes 1,2)

Category	Tons	Notes on Reduction Initiatives
Direct emissions	225,000	Preventing Global Warming from Business Sites Reference
Indirect emissions from energy sources	790,000	Preventing Global Warming from Business Sites Reference

Downstream (Scope 3)

Category	Tons	Notes on Reduction Initiatives
Transportation and distribution (Downstream)	"53,000 (Distribution in Japan 25,000 / Distribution overseas 28,000)"	Environmental Considerations in Transportation Reference
Processing of sold products	Not covered	-
Use of sold products	5,083,000	Eco-Friendly Products Reference
End-of-life treatment of sold products	1,000	-
Leased assets (Downstream)	Not covered	-
Franchises	Not covered	-
Investment	Not covered	-

In recent years, there has been a growing movement toward accounting for and reporting greenhouse gas emissions throughout entire supply chains. Applying the Scope 3 international standard established by the GHG Protocol for accounting for and reporting greenhouse gas emissions, the Fujitsu Group, via the Carbon Disclosure Project (CDP)*6, discloses information on greenhouse gas emissions from purchased goods and services, upstream leased assets, transportation and distribution, use of sold products, and end-of-life treatment of sold products.

Moreover, we are proactively engaged in reducing GHG emissions in areas thought to be particularly large sources within the value chain. Examples include energy consumed when products are used, and activities related to raw materials.

Accounting for and reporting Scope 3 GHG emissions in the ICT sector, however, involves many challenges, so Fujitsu is participating in the formulation of the GHG Protocol's ICT sector guidance*7. In the same vein, we have established internal working groups to consider issues related to the reduction of GHG emissions throughout society, including our supply chain. Through these and other initiatives we are actively working to address GHG-related issues.

*5 GHG Protocol's standards:

Standards formulated by the Greenhouse Gas Protocol, which was established jointly by the World Business Council for Sustainable Development (WBCSD) and World Resources Institute (WRI). The standards set forth approaches for accounting for and reporting emissions by businesses and their value chains.

*6 Carbon Disclosure Project (CDP):

The CDP is a not-for-profit organization in which institutional investors, companies, and others work together to promote the reduction of greenhouse gas emissions and the sustainable use of water resources by encouraging the world's leading companies to account for, and disclose information on, their environmental risk.

*7 ICT sector guidance developed by the GHG Protocol:

[GHG Protocol: ICT Sector Guidance](#) 

Responding to Climate Change

The Fujitsu Group is not only taking initiatives to reduce GHG emissions; we are also advancing measures to address risks associated with natural disasters and climate change, on a global basis.

Case Study

Flood Defenses for a New Plant in Thailand

For three months beginning with July of 2011, Thailand suffered a flood disaster that also caused serious damage to the plant of Transtron (Thailand) Co., Ltd. (TTT), a Fujitsu affiliate. Flood water rose to a level of 3m inside TTT's one-story plant, which housed manufacturing equipment, electrical and other facilities, and finished products waiting for shipment, and caused the company to suddenly suspend its operations. TTT responded to the emergency at hand, and, looking to the future, planned and proposed a new plant that would be safe against the risk of another flood of similar proportions. The proposed design called for the elevation of transformers, the external units of air-conditioning systems, and other facilities to heights at least 5 m above ground level, and the installation of production equipment on the second floor. Furthermore, to protect the entire plant site from floods, the company came up with the idea of building a dyke on the north side of its property. It discussed that idea with the government, which gave its approval. With the March 2013 completion of the new plant and dyke, TTT has now not only secured the safety of its employees but also taken steps that will minimize impacts on its principal manufacturing facilities and products in the event of another major flood in the future.

Contributing to Resource Reuse by Recovering High Concentrations of Copper from Wastewater



Copper, a base metal used in many everyday items, had been treated as a resource available in relative abundance in the Earth's crust. Now, however, the mining of copper has become difficult and there are even those who are starting to think of it as a "rare metal."

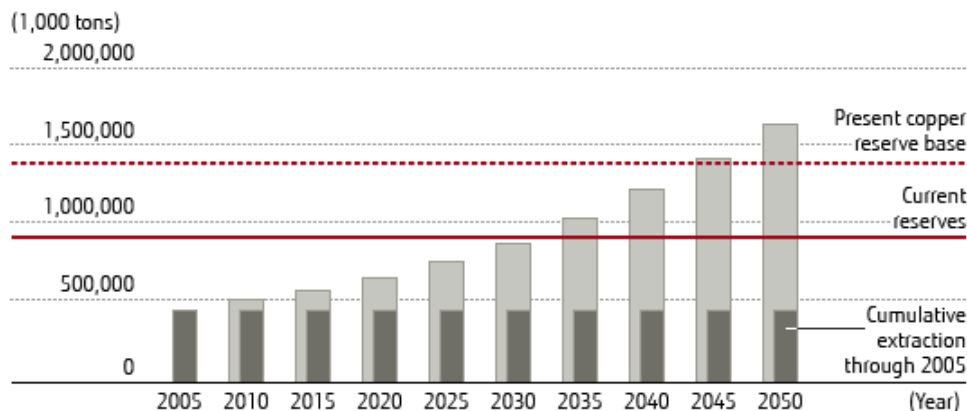
At Fujitsu's Nagano Plant, we have embarked on an initiative in which the recovery of high concentrations of copper from industrial wastewater will lead to the effective reuse of this finite resource.

Current Status of the Familiar Resource, Copper

Copper, which is referred to as a base metal, is used in familiar items like 10-yen coins and electrical wire. Said to be the metal first used by humans, the smelting of copper has been going on in various places across the globe since time immemorial. Mining rich copper ore, however, is no simple task. The limits of what can be retrieved from surface mines have been reached in recent years and underground mines are extending deeper and deeper into the Earth. This kind of mining requires more energy, and produces more waste, so there are concerns about rising environmental impacts^{*1}. Mining can also give rise to surface subsidence and sinkholes, and chemical contamination of soil, groundwater, and surface water, as well as other forms of environmental pollution.

Even as copper becomes harder to find, however, demand for it is rising. It is predicted that by 2050, cumulative consumption of copper will exceed copper ore reserves^{*2}. The recycling of copper, therefore, will become ever more important as a way to effectively use a finite resource without impacting the environment.

Forecast of Global Cumulative Copper Consumption



(Note) The reserve base is the amount of copper ore that is technically feasible to mine, but for which economic or other reasons have precluded mining.

Source: Prepared by Fujitsu based on information referenced from "Forecasting of the Consumption of Metals up to 2050" published by the National Institute of Materials Science.

*1 Environmental impact of copper mining:

 [Please refer to the Annual Report on the Environment in FY 2011 \[1.37MB\]](#)

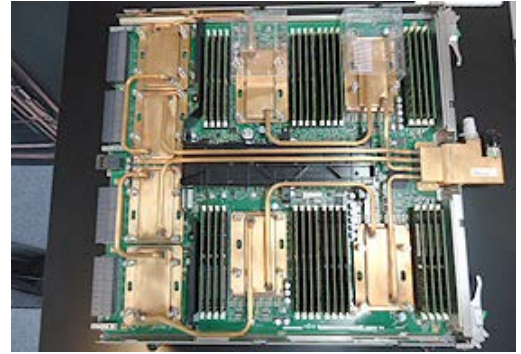
*2 Copper consumption forecasts through 2050:

[Please refer to "Forecasting of the Consumption of Metals up to 2050." published by the National Institute of Materials Science](#) 

Issues in the Recovery of Copper from Wastewater

Copper is used in the Fujitsu Group's ICT equipment. One example is the printed circuit boards used in servers and other equipment. Printed circuit boards consist of plastic onto which copper sheets have been laminated and etched to create circuits connecting electronic components. Fujitsu's Nagano Plant manufactures printed circuit boards.

Wastewater containing copper results from the manufacturing process for printed circuit boards, so the Nagano Plant is pursuing initiatives aimed at recovering high concentrations of copper from the wastewater. In the past, multiple chemicals were used to coagulatively precipitate copper out of wastewater. Those chemicals, however, bonded to copper in large volumes, creating a sludge^{*3} from which it was difficult to recover high concentrations of copper. Moreover, the recovery process required significant amounts of time and additional space for the installation of processing facilities.



Printed circuit board



Sludge



Conventional facility

^{*3} Sludge:

A semi-solid substance that is generated from the processing of wastewater and contains heavy metals, water, and other substances.

Enabling the Recovery of High Concentrations of Copper by Revising the Wastewater Treatment Process

To improve the recovery of copper from wastewater, members of a new-technology advancement project organized by Fujitsu Facilities Limited, the manager of the Nagano Plant's facilities, began to consider wastewater treatment approaches that did not use chemicals in a coagulative precipitation process. What they settled on was a new system that recovers copper from wastewater with a filtration process.

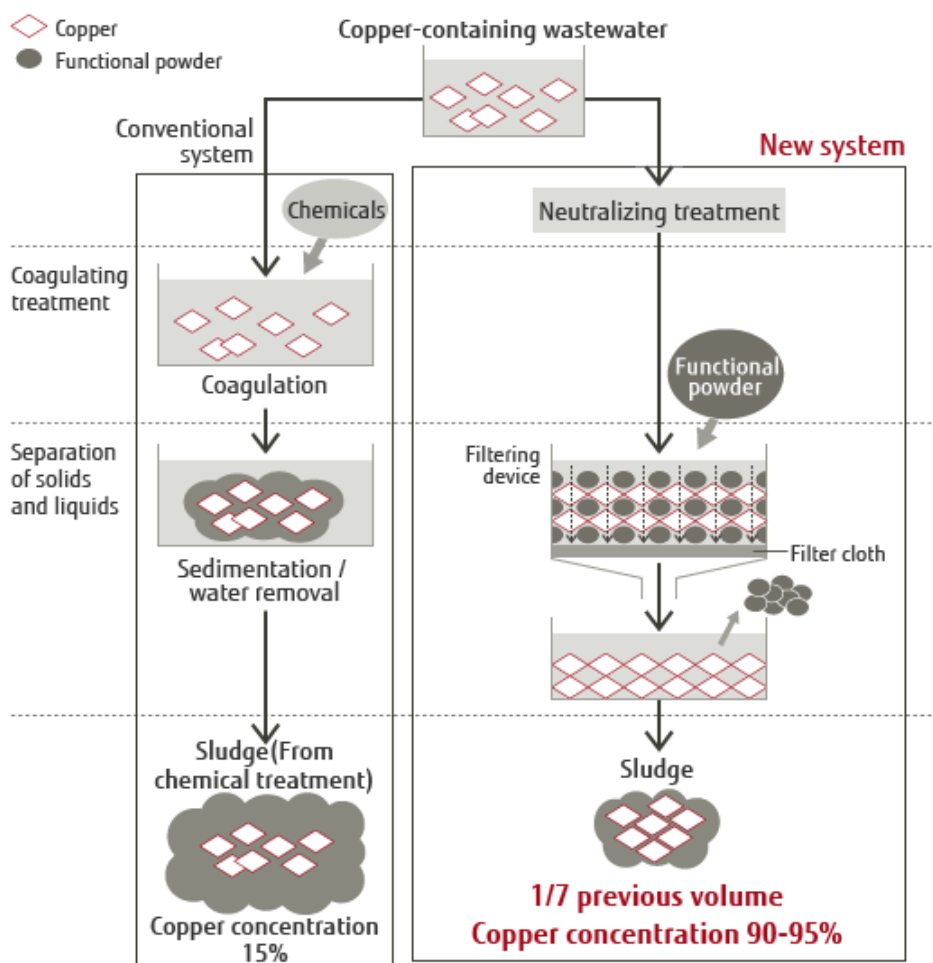
Copper particles are extremely small and clog filter cloth, so filtering was previously not a practical option. The new system, however, uses a functional powder that provides high filtering efficiency, so the separation of solids and liquids can be performed without clogging the filter cloth. Furthermore, after filtering, the functional powder itself is easily recovered by taking advantage of its magnetic properties, and can be reused. The Nagano Plant was the first to adopt the new copper recovery system in Japan, and began using it in June 2012.



New Wastewater Processing Equipment

The new system, by enabling the recovery of copper in high concentrations, has increased the copper content of sludge to 90-95%, from around 15% using the previous system. It has also reduced the volume of sludge to one seventh (5 tons/month) what it was before, and reduced money spent on chemicals by 5.48 million yen. Processing time, as well, has been shortened - to 1 hour from 2 before - and the space for processing equipment has been reduced by about half.

Overview of the New System



Expanding Application of the System and Enhancing the Added Value of Recovered Copper

At present, we are aiming to use this new system for about 10% of the total wastewater from the Nagano Plant, with plans to gradually increase this figure. We are also considering the adoption of copper oxide conversion technology^{*4}, which has already been implemented within the Fujitsu Group, to process recovered copper into high-value-added copper oxide.

Going forward, the Fujitsu will continue to proactively reuse resources and reduce waste generation.

^{*4} Copper oxide conversion technology:

Technology that, through reaction processing of copper chloride and copper hydroxide, creates copper oxide.

VOICE

Masahiro Yazawa, Fujitsu Facilities Limited, Facility and Environment Services Division, Nagano Plant

Until now, I have been actively engaged in bottom-up environmental activities, like the use of geothermal heat for the air conditioning system of the Nagano Plant's clean room. The development of the new wastewater treatment system was another example of how a project got its start from frontline facility operators, including me, stepping away from conventional thinking to discuss new ways to handle problems. In the beginning, there were some struggles when the filtering process did not produce the expected results. The engineers, operators, maintenance people and others participating in the project, however, contributed their expertise and know-how in a unified effort to identify problem causes, and solved the problem by changing the process flow. Maintaining this kind of initiative going forward, we are already considering future projects, which might take on challenges like recovering heat from wastewater, creating a small-scale hydroelectric power system, or making even more effective use of wastewater.



Environmental Activities in Factories

We work to comprehensively lower the environmental burden of factories making products for the Fujitsu Group.

Approach to Reducing Burdens at the Factory

The Fujitsu Group continually strives to reduce the quantities of materials, water resources, and energy used at its factories, as well as the amounts of chemicals and waste materials generated and atmospheric pollutants emitted, while trying to minimize manufacturing costs. It also takes a rigorous approach to complying with laws and regulations and eliminating environmental risks.

Development of Green Production Technology

Assembly, processing and other production-related processes and equipment account for roughly 40% of overall CO2 emissions at Fujitsu factories. In a move to cut energy consumption associated with production, we are working to visualize power usage particularly around surface mount technology (SMT), assembly and testing processes. Improvements are then implemented beginning with processes and facilities where the most efficient reductions in power consumption are possible.

Case Study

Cutting Electricity Consumption by Insulating Electric Heaters

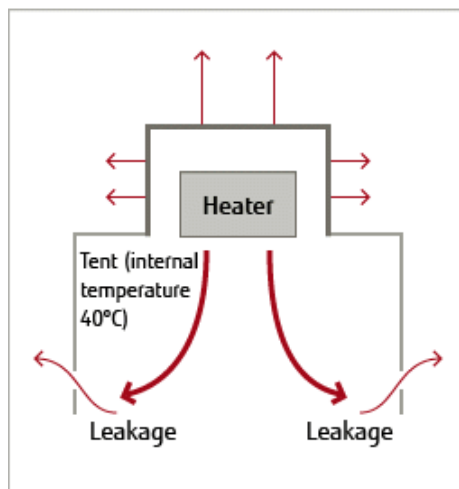
PFU TechnoWise Limited, a manufacturer of scanners and information kiosk terminals for the Fujitsu Group, works with Fujitsu's Monozukuri Development Unit(Production Promotion Unit) to develop green manufacturing technologies, including ones that reduce electricity usage, for saving energy. In May 2012, they came up with a way to greatly reduce the amount of electricity used by aging tents, which are used in the manufacturing of information kiosk terminals and evaluate the reliability of products under high heat.

In a traditional aging tent, an electric heater positioned at the top takes in and heats outside air to keep the inside of the tent at 40°C. Air pressure inside the tent, therefore, is higher than outside, and warm air leaks from the bottom and sides. That the heater must replace the amount of warm air leaked means energy efficiency is very bad. To improve upon this situation, the electric heater was covered with an insulated box, causing the warm air inside the tent to recirculate through the heater. This relieved the difference in air pressure, eliminating the warm air leakage, and, because the recirculation of warm air improved the operating efficiency of the heater, the amount of electricity needed to keep the redesigned tent at 40°C was reduced. Measurements show that an improved aging tent uses only 0.325kWh, less than a quarter (more specifically, a 76.7% savings) of the 1.4kWh used by a traditional model. In February 2013, this initiative was one of 60 energy-saving activities that were recognized with an award for outstanding energy management at the 2012 Ishikawa Energy-Saving promotion convention.

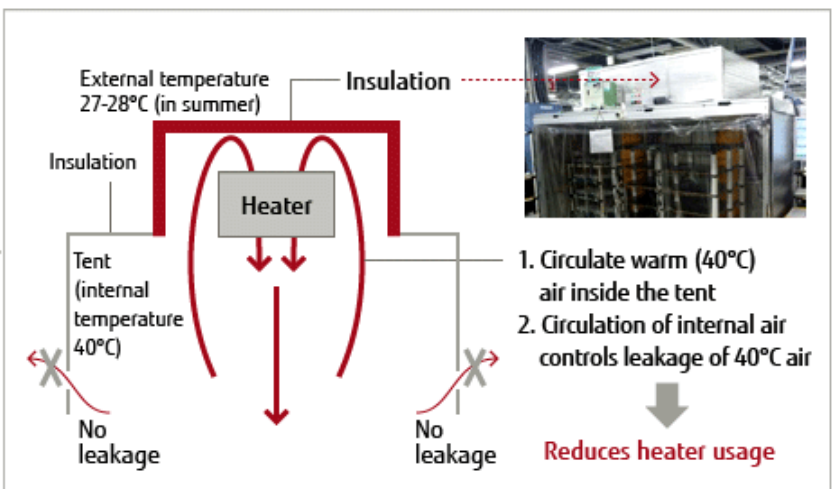
Moving forward, we will continue with efforts to steadily save energy with changes to air conditioning facilities, exhaust ducts, and other improvements within manufacturing plants.

Environmental Activities in Factories

Before change



After change



Front of aging tent



Back of aging tent

Case Study

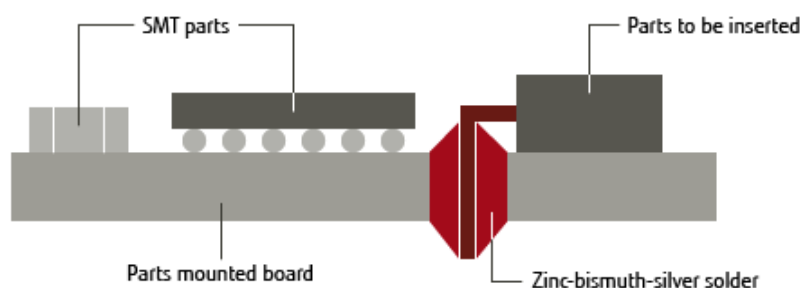
Low-Melting-Point Lead-Free Solder for Environmentally Friendly Product Manufacturing

Fujitsu IT Products Limited, which makes server products, had adopted the use of lead-free solder to comply with the RoHS Directive for UNIX servers. The solder, however, had a high melting point of over 200°C, meaning that the heater for the solder furnace had to be kept at a high temperature and large amounts of electricity were consumed.

To improve upon this situation, the lead-free solder was fundamentally changed to a low-melting-point solder composed of zinc, bismuth, and silver. With this newsolder, which has a melting point of only 139°C, the solder furnace can be kept at a lower temperature and electricity consumption for the furnace heater has been reduced by 39%. That means an annual energy cost saving of about 740,000 yen and CO2 reduction of around 14 tons. This low-melting-point lead-free solder is now being planned for use on IA servers and mainframes.



Place where low-melting-point lead-free solder is used



- [Development of Green Production Technology : Case Study Archives](#)

Reducing the Amount of Waste Generated

Basic Approach

Working towards a recycling-minded society, our 3R*¹ policy encourages all employees to separate waste materials into different categories for effective recycling.

*1 3R:

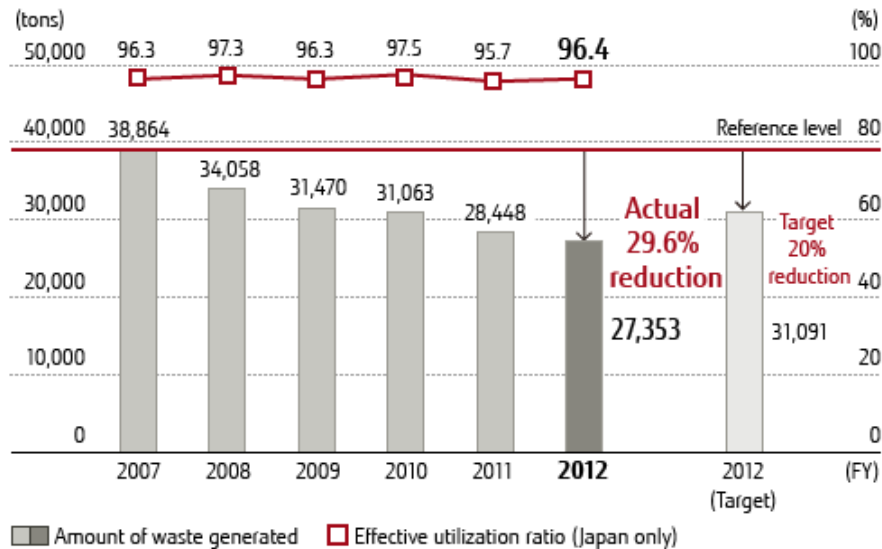
Reduce, Reuse, and Recycle

FY 2012 Performance

In the Fujitsu Group Environmental Protection Program (Stage VI), we set the goal of reducing the amount of waste business operations generated by 20% compared to FY 2007 levels by the end of FY 2012.

We generated 27,353 tons of waste (per unit of actual sales: 6.2 tons/billion yen) in FY 2012, which was a 3.8% reduction from the previous fiscal year's level and a 29.6% reduction from the FY 2007 level. The Fujitsu Group Environmental Protection Program (Stage VI) target of a 20% reduction from the FY 2007 level, therefore, was achieved. The reasons for these reductions include the conversion of waste paper and cardboard to valuable materials, and the partial introduction of in-house processing of flux cleaning solvent.

Trends in Amount of Waste Generated and Effective Utilization Ratio



Breakdown of Waste Generated, Effective Utilization, and Final Disposal (t)

Waste Type	Waste Generated	Effective Utilization	Final Disposal
Sludge	4,377	4,298	79
Waste oil	1,863	1,862	0.4
Waste acid	3,728	3,725	3
Waste alkali	3,388	3,386	2
Waste plastic	4,046	3,955	91
Waste wood	1,306	1,306	0
Metal waste	517	515	2
Glass/ceramic waste	288	288	0
Other ^{*2}	7,839	6,010	1,829
Total	27,353	25,346	2,007

*2 Other:

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

Case Study

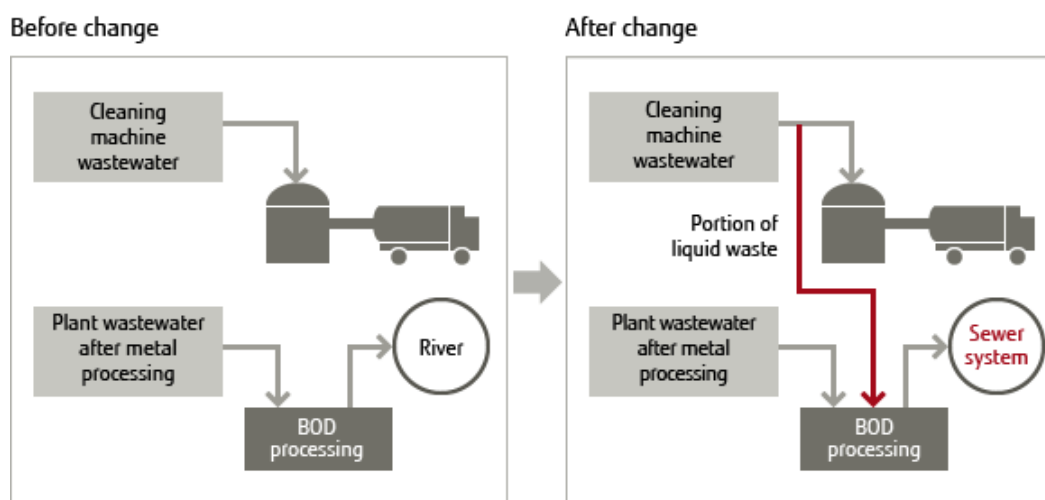
Partial Introduction of In-House Processing of Flux Cleaning Solvent

At Shinko Electric Industries Co. Ltd., the cleaning fluid (type of ethylene glycol) used in a cleaning process to remove flux from products was being disposed of as industrial waste.

Switching the discharge destination of industrial wastewater to the sewer system from a river made it possible to process a portion (47%) of the liquid waste in-house and reduce industrial waste discharges by approximately 300 tons per year.

Annual savings in processing expense, meanwhile, came to about 3.4 million yen.

In-House Processing Flow for Cleaning Machine Wastewater



- [Reducing the Amount of Waste Generated : Case Study Archives](#)

Achieving Zero Emissions at Domestic Group Companies

The Fujitsu Group promotes zero emissions*3 activities at Group companies in Japan. Zero emissions status was not achieved at some locations. We will continue considering ways to achieve zero emissions at these locations.

*3 Zero emissions:

Refers to effectively using 100% of waste and eliminating waste earmarked for landfills or simple incineration.

The Waste Targets of the Fujitsu Group Environmental Action Plan (Stage VII)

Fujitsu has already marked significant achievements in reducing waste. As ongoing management targets, therefore, we will work to reduce waste to less than the average level of 2007-2011 (31,134tons) and to continue zero emission activities among Japanese plants.

Effective Use of Water Resources

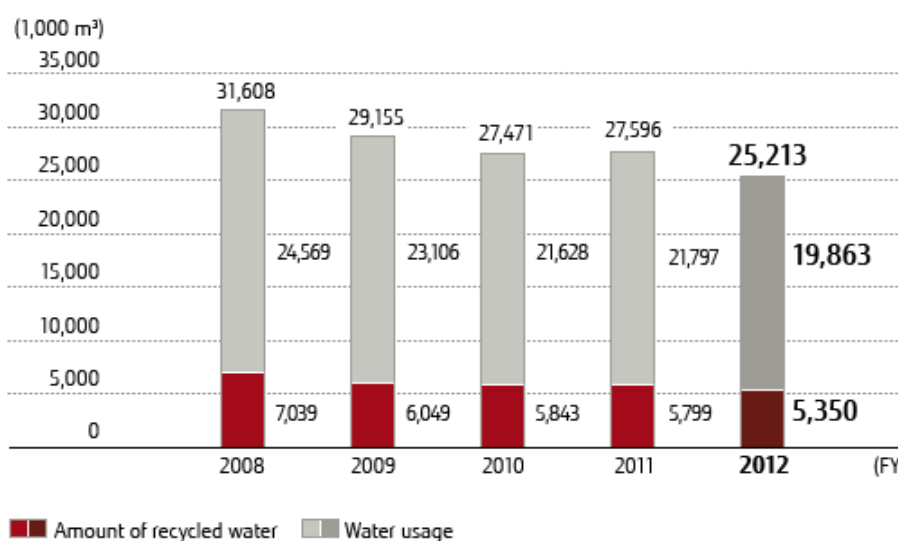
Basic Approach

We are continuously working to recirculate and reuse industrial water through approaches such as pure water recycling and rainwater use. In the Fujitsu Group Environmental Action Plan (Stage VII), which we have begun to implement in FY 2013, we have established effective water usage as a new goal and have taken steps like having overseas sites set their own quantitative targets for reducing water usage in an effort to do even more than we have in the past to use water effectively.

Results for FY 2012

Our water use for FY 2012 was 19,863 thousand cubic meters (per unit of actual sales: 4,530 cubic meters/billion yen). This was 8.9% lower than FY 2011 and 8.2% lower than FY 2010. The ratio of recycled water to water use was 26.9% in FY 2012, which was about the same level as the 26.6% ratio in FY 2011.

Trends in Water Usage and Amount of Recycled Water



The Water Resource Targets of the Fujitsu Group Environmental Action Plan (Stage VII)

Fujitsu has traditionally and consistently pursued the effective use of water resources. However, with rising international interest in water resources, we decided that it was necessary to take our activities to an even higher level. Working toward the objective of efficient use of water resources, through approaches like water recycling and water saving, we are working to achieve an even higher level of effective water use.

Case Study

Reduced Water Use at Fujitsu Australia

In Australia, the driest inhabited area of the earth, climate change has given rise to severe drought and other problems making water use a critical issue in realizing a sustainable society.

Though ICT industries do not use extremely large volumes of water, they must still endeavour to use water efficiently. At Fujitsu Australia, the datacenter is the primary consumer of water, over half of which is used for cooling. Since energy and water usage are correlated, increasing the datacenter's energy efficiency resulted in reduced water consumption. Fujitsu Australia is also using rainwater collected from its grounds to water its property and gardens, flush toilets, and provide cooling in its datacenter's closed-loop cooling system.

At The Gauge, a building housing Fujitsu Australia offices, 2.4 million liters of water from a sewage treatment system are reused annually. The building is equipped with many other environmentally friendly features and has won a six-star Green Star rating, the highest available in this Australian environmental architecture rating system.

Chemical Substances Management

Basic Approach

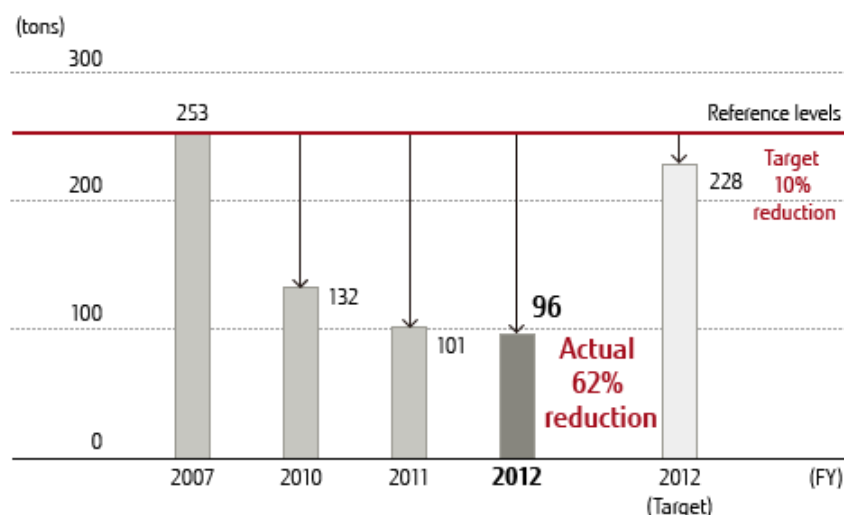
Prevention of environmental risks that could lead to environmental pollution or adverse health effects due to the use of harmful chemical substances has been established as our basic policy for chemical substances management. We manage the amounts used for about 1,300 chemicals, and we work to reduce the amount discharged and implement appropriate management at every business site.

Results for FY 2012

We set the goal of reducing emissions of specific chemical substances by 10% compared to FY 2007 by FY 2012 in the Fujitsu Group Environmental Protection Program (Stage VI).

Emissions of specific chemical substances by the whole Fujitsu Group in Japan in FY 2012 were 96 tons (4.7% reduction from FY 2011), which was a 62% reduction compared to the FY 2007 reference year. The goal of achieving a 10% reduction compared to FY 2007, therefore, was achieved.

Trends in Emissions of Specific Chemical Substances



*Specific chemical substances: Of the substances that are the object of VOC and PRTR regulation, those for which the amount handled is at least 100 kg/year, and one substance selected from the top three substances in emission levels for the reference year.

The Chemical Substance Targets of the Fujitsu Group Environmental Action Plan (Stage VII)

Fujitsu has already marked significant achievements in reducing chemical emissions. As ongoing management targets, therefore, we will work to reduce chemical emissions to less than the average level of 2009-2011 (PRTR: 21t, VOC: 258t)

Compliance with the Revised Chemical Management Law

Following revisions to the Chemical Management Law^{*4}, more chemical substances are now covered by the MSDS^{*5} system and the PRTR^{*6} system (revisions applied to the MSDS system from October 2009, and to the PRTR system from April 2010).

Responding to these revisions, the Fujitsu Group has asked its suppliers to cooperate in the delivery of chemicals, and based on the revised PRTR system it is carrying out initiatives to obtain an accurate grasp of the amounts of chemicals transported and emitted. In FY2012, emissions of chemical substances covered by the PRTR system were 22 tons, and per unit of actual sales were 5.0kg/billion yen).

*4 Chemical Management Law:

A law to promote correct understanding, management, and reporting of amounts of designated chemicals emitted into the environment

*5 MSDS:

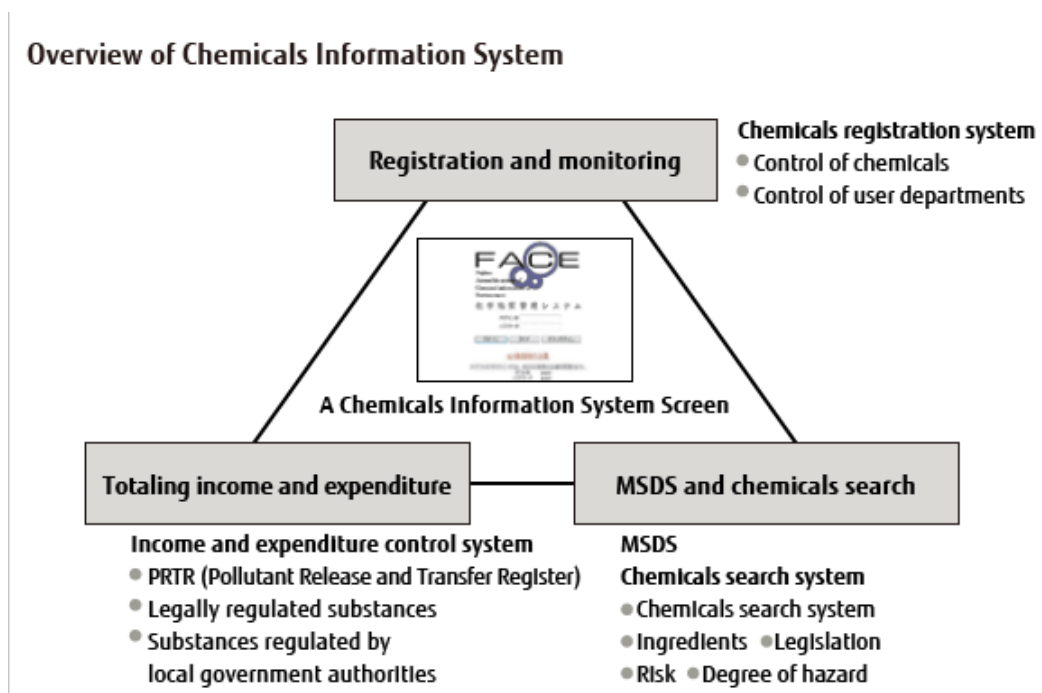
A system that requires attachment of a Material Safety Data Sheet to chemical deliveries

*6 PRTR:

Abbreviation of Pollutant Release and Transfer Register. This system requires the registration and reporting of data relating to the emission of harmful chemicals into the environment and volumes within transported waste.

Operation of "FACE," the Chemical Information System

The Fujitsu Group operates a Chemical Information System called "FACE." It can be used not only to register and monitor chemicals at every site but also to manage MSDS and control income and expenditure in conjunction with purchasing data and inventory data, FACE is helping the Group to strengthen its chemicals data and make it more efficient.



- [Basic Policy for Chemical Substances Management : Case Study Archives](#)

Preventing Air and Water Pollution

Preventing Air Pollution

We have set voluntary controls that are more stringent than emissions standards under related laws and ordinances 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 sulfur oxide, nitrogen oxide and other harmful substances and reduce emissions through measures such as controlling incineration at facilities that emit smoke, using fuels with low sulfur content, and managing operations at exhaust gas processing facilities. Furthermore, an absorption system using activated charcoal has been introduced to reduce the atmospheric discharge of organic solvent vapors containing substances like VOCs.

In addition, emission of dioxins has been prevented by suspending use of (completely phasing out) 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 related laws and ordinances and conduct regular measurement and monitoring on this basis. We separately recover and recycle chemicals used in production processes, instead of discharging them into wastewater. And we are working to appropriately process harmful substances and other regulated substances (COD, BOD, etc.) and reduce discharges of them 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 Ozone Layer Depletion

Elimination of Ozone-depleting Substances

The Fujitsu Group has completely eliminated use of ozone-depleting substances in manufacturing processes (parts cleaners and solvents) by utilizing precision aqueous cleaning systems and no-clean soldering technologies. Refrigerant CFCs used in air conditioning equipment (freezers, etc.) are being replaced with non-CFC refrigerants when equipment is upgraded, and measures are also taken to prevent leaks.

Achievements in Abolishing Ozone-depleting Substances

Ozone-depleting substance	Date of elimination
Cleaning freons (CFC-113, CFC-115)	End of 1992
Carbon tetrachloride	End of 1992
1,1,1-trichloroethane	End of October 1994
Substitute freons (HCFCs)	End of March 1999

Environmental Liabilities

The Fujitsu Group, in properly forecasting environmental liabilities and communicating our soundness and stance of not deferring environmental liabilities, has recorded a liability of 8.28 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 2012, to be necessary for the Fujitsu Group in Japan to carry out these tasks.

For processing waste with high levels of PCBs (transformers and capacitors), we have registered in advance with Japan Environmental Safety Corporation (JESCO), which processes PCB waste under Japanese government supervision, and perform this processing based on JESCO plans.

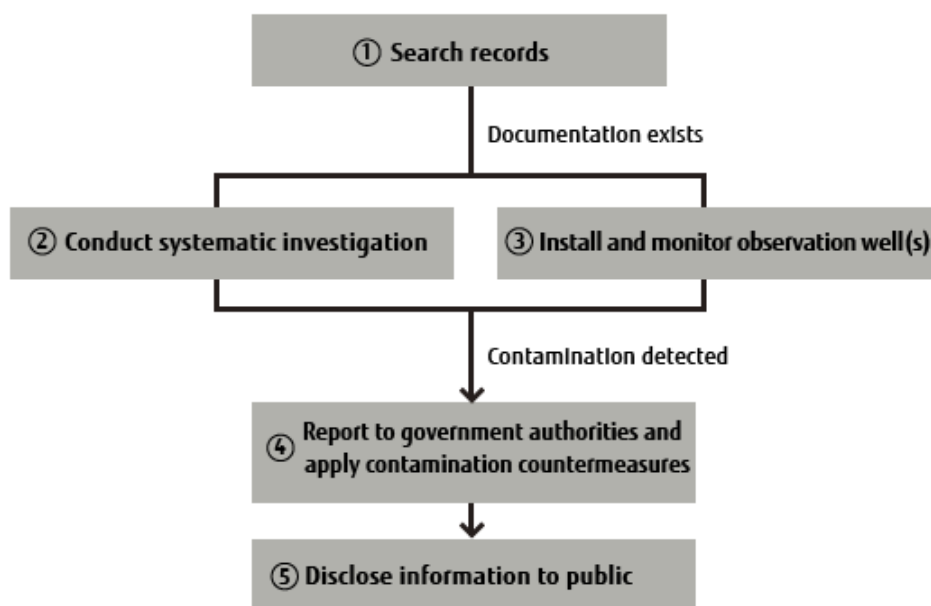
Preventing Soil and Groundwater Pollution

Fujitsu conducts soil and groundwater contamination surveys, implements countermeasures, and discloses the resulting data.

Our Approach

We review as necessary our internal rules established in FY 2006 in response to soil and groundwater problems, and will handle such problems based on these revised rules for soil and groundwater surveys, policies, and disclosure. In the future, in parallel with performing planned surveys and, if contamination is discovered, implementing cleanup operations and countermeasures appropriate for the conditions at each business site, we will also disclose relevant information in collaboration with administrative agency.

Monitoring the Impact of Groundwater Contamination Outside of Fujitsu Sites*



* We monitor groundwater contamination near our sites, which is the largest risk for soil and groundwater pollution.

Status of New Soil and Groundwater Pollution Measures Undertaken in FY 2012

A voluntary survey in FY 2012 revealed soil and groundwater contamination at two sites. We reported the state of contamination at this site and explained our countermeasures to administrative agency.

Measures to Clean Up Soil and Groundwater Pollution Due to Past Business Activities

We have dug wells to monitor groundwater contamination near our sites where soil or groundwater pollution has been found. We continuously monitored eight such sites in FY 2012.

The table below lists the largest of the most recent measurements for chemicals with levels recognized to have exceeded regulated levels in FY 2012 stemming from past business activities.

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	3.0	0.04
Oyama Plant	Oyama City, Tochigi Prefecture	We are continuing to clean up VOCs by pumping and aeration.	Cis-1, 2-dichloroethylene	4.275	0.04
			Trichloroethylene	0.048	0.03
			1,1-dichloroethylene	0.032	0.02
Nagano Plant	Nagano City, Nagano Prefecture	We are continuing to clean up VOCs by pumping and aeration.	Cis-1, 2-dichloroethylene	0.16	0.04
Suzaka Plant	Suzaka City, Nagano Prefecture	We have begun construction of an underground impervious wall and facilities for processing pumped water.	Polychlorinated biphenyl	0.021	Must not be detected
Fujitsu Interconnect Technologies Kurohime Office (Formerly Shinetsu Fujitsu)	Shinano machi, Kamiminouchi Gun, Nagano Prefecture	We are continuing to clean up VOCs by pumping and aeration.	Cis-1, 2-dichloroethylene	0.12	0.04
Fujitsu Optical Components	Oyama City, Tochigi Prefecture	We are continuing to clean up VOCs by pumping and aeration.	Cis-1, 2-dichloroethylene	0.114	0.04
			Trichloroethylene	0.18	0.03

Site Name	Location	Cleanup and Countermeasure status	Monitoring Well Maximum Value (mg/l)		Regulated Level (mg/l)
			Substance	Measured Value	
FDK Sanyo plant	Sanyo-Onoda City, Yamaguchi Prefecture	We are continuing to clean up VOCs by pumping and aeration.	1, 2-dichloroethylene*1	0.11	0.04
			Cis-1, 2-dichloroethylene	0.053	0.04
			Trichloroethylene	0.090	0.03
FDK Energy (Formerly the FDK Washizu Plant)	Kosai City, Shizuoka Prefecture	We are continuing to clean up VOCs by pumping and aeration.	Trichloroethylene	0.35	0.03
			Tetrachloroethylene	0.41	0.01
			Cis-1, 2-dichloroethylene	0.71	0.04

*1 1, 2-dichloroethylene:

The analysis item was changed from "Cis-1, 2-dichloroethylene" to "1, 2-dichloroethylene" in accordance with the guidance of administrative agency in October.

Environmental Activities in Offices

We strictly observe all laws concerning the environment and also work to save energy and achieve zero waste emissions, not only at our production sites but also at all our business offices.

Green Office System

The Fujitsu Group's Green Office system comprehensively evaluates the environmental consciousness and independent environmental initiatives undertaken by individual offices and produces visual representations of the results. The Green Office system was launched in FY 2007 for offices in Japan and, by FY2009, all of the Group's 371 offices (the total at the time) had achieved 3-star ratings and zero waste emissions^{*1}.

In FY 2010, we established the goal of achieving ratings of 4 stars or higher for all of our offices in Japan by the end of FY 2012 as part of the Fujitsu Group Environmental Protection Program (Stage VI). Achieving this goal meant, in addition to satisfying the conditions for three stars, undertaking biodiversity conservation activities, disclosing environmental information to stakeholders, and unifying industrial waste processing for office emissions. The first two of these goals were achieved through application of the "Act-Local-System" social contribution activity database. As for the third, we introduced the first system for unifying the processing of industrial waste^{*2} in Japan and did so by the end of FY 2012, bringing all of our offices in Japan up to the 4-star rating and achieving our goal.

For our overseas sites, we prepared draft standards and began applying them on a trial basis in FY 2012. As results come in, we will examine them and consider steps going forward.

In Japan, we aim to further refine the Green Office system and are considering incorporating ISO14031-compliant environmental performance evaluations toward that end. By continuing with the Green Office system, making visible the details of the activities carried out by individual offices, and building a database for sharing information on and expanding activities among our offices, we will continue to raise the level of environmental activities throughout the Fujitsu Group.

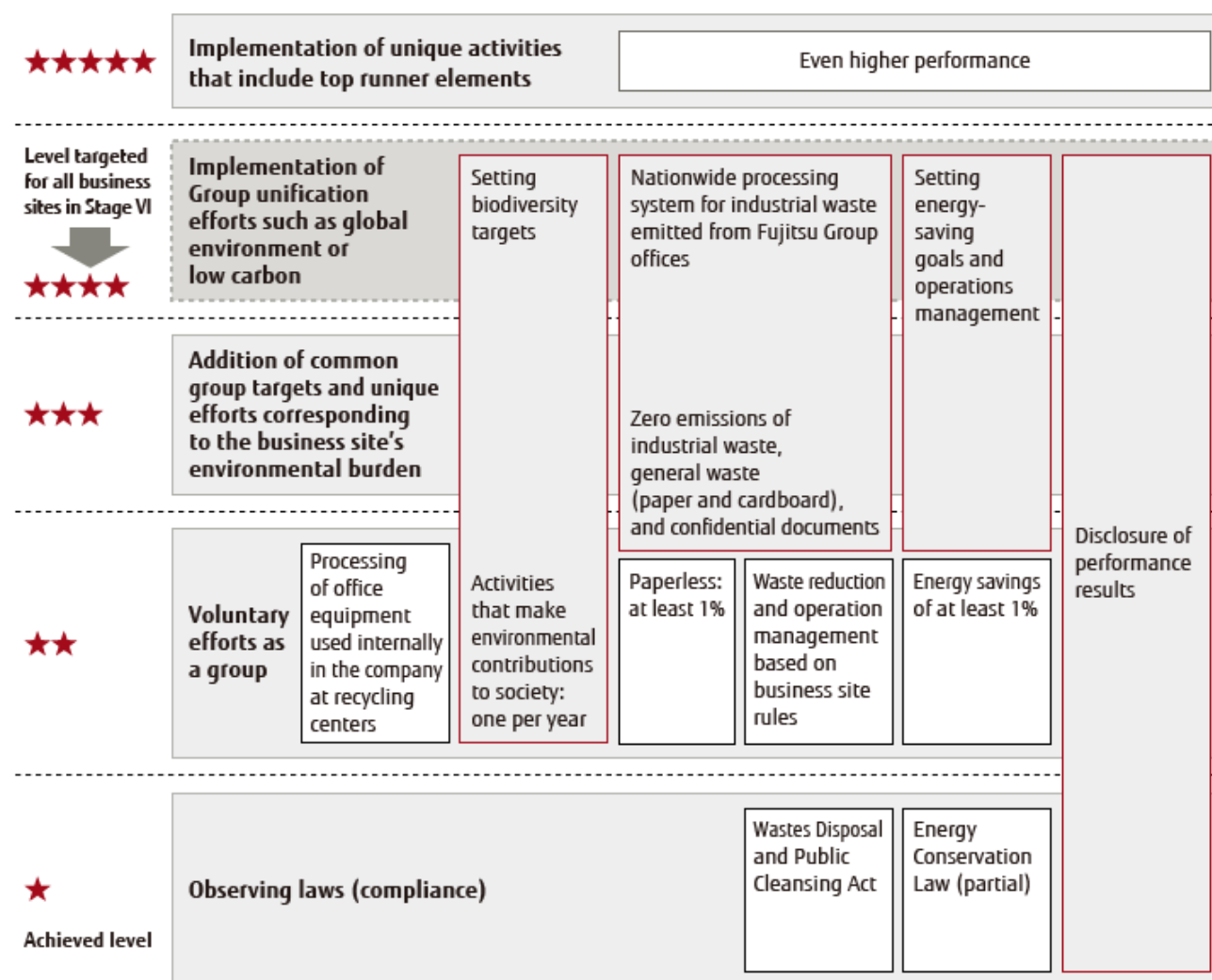
^{*1} Zero waste emissions:

For simple calculations of emissions from the incineration or landfill disposal of industrial waste and paper waste

^{*2} System for unifying the processing of industrial waste:

Under this system, we have used certain criteria to select waste processing companies on a regional basis, and have them regularly collect industrial waste from our offices.

Overview of the Green Office Evaluation System



Creating a Database of Environmental Activity Measures, and Utilizing Checklists

Through Green Office system implementation, we check and create a database of the progress and status of measures targeting energy efficiency, waste reduction, paperless operations and other goals at all applicable offices, and produce a checklist of key measures. These checklists are proving useful not only as a reference for potential measures to adopt when offices set their environmental objectives and targets, but also for invigorating and enhancing activities by making visible operational improvement issues and measures that require investment.

Reducing Waste from Offices

On-Site Waste Disposal Auditing

To confirm that ICT equipment and other types of industrial waste are being properly dealt with, the Fujitsu Group has developed and operates a structure under which Fujitsu Recycling Centers, as waste processing specialists for in-house ICT equipment, have been established wherever Group companies operate. Under this framework, we perform standardized Group-level checks through periodic, on-site audits. Specifically, a member of the Fujitsu Corporate Environmental Strategy Unit visits the recycling centers once a year with the person in charge of waste disposal from the relevant office, using a standardized checklist to check the documentation and the onsite disposal operation itself.

In addition, to sustain and improve security levels with respect to confidential document disposal, we implement on-site validation once a year of Japan Security and Recycle Network, a company that processes confidential documents based on a nationwide paper recycling system created in FY 2009.

- [Reducing the Waste Generated in Office : Case Study Archives](#)

Reducing CO2 Emissions in Offices

Efforts by the Fujitsu Group to reduce CO2 emissions are guided mainly by promotion of the measures detailed below.

- Energy-saving equipment measures (for Group-owned buildings)
- Adjust appropriate room temperature for office air conditioning (28℃ in summer and 20℃ in winter)
- Extinguish unnecessary lighting, shorten air-conditioner use outside of regular work hours (uniform quitting time, etc.)
- Set energy-saving mode for PCs, turn off display when away from desk
- Turn off standby mode power in AC adapters, use smart power sockets
- Implement nighttime operation control for PCs, shared terminals, development terminals and other equipment
- Consolidated access points
- Perform in-house and request external evaluations of energy efficiency
- Install green curtains (including at some leased offices)
- Transition to energy-saving vending machines
- Introduce LED lighting and transition to switches that adjust lighting to activity levels
- Introduce hybrid cars

For more information on CO2 emission reductions at our business sites, including some leased offices, in Japan, please refer to the following webpage.

- [Efforts to Prevent Global Warming](#)
- [Reducing CO2 Emission in Offices : Case Study Archives](#)

Environmental Activities in Datacenters

Fujitsu promotes the construction of environmentally conscious datacenters, and aims to help realize low-carbon, sustainable societies by contributing to greater productivity for customers, and lowering the burden on the environment.

Promoting Environmentally Conscious Datacenters

Fujitsu's environmentally conscious datacenters, which have as their top priority the provision of high-quality service to customers, are characterized not only by their energy efficiency but also by their emphasis on reliability and safety. In addition, by visually communicating energy usage, they enable continuous PDCA cycles for identifying issues, taking action, and checking results, and make clear the environmental contribution effects of using a Fujitsu datacenter.

Fujitsu has identified seven categories of technical aspects that merit consideration when constructing an environmentally conscious datacenter. The Fujitsu Group has accumulated technology and know-how in conformity with this framework and applies it in constructing or refurbishing datacenters inside and outside of Japan.

Framework for Considering Technology for Constructing an Environmentally Conscious Datacenter

- **Visual Representation**

Monitoring electricity consumption, temperature, and humidity to analyze and evaluate energy usage.

- **Power Distribution Innovation (Optimal Energy Usage)**

Our goal is to achieve high reliability and rationality in the distribution of electric power to ICT equipment, and do so from the perspectives of stable operation, business continuity, and energy efficiency. We are also working with suppliers to achieve technological improvements and innovations in battery materials for uninterruptible power supplies (UPS) and in other individual devices and facilities.

- **Ultra-High Efficiency Air Conditioning (Optimal Air Conditioning)**

We work to make air conditioning, which is critical to saving energy, more efficient. Our aim is to achieve air conditioning that relies 100% on external air and is optimized for the climatic and geographic conditions of each datacenter.

- **Green Energy**

We continue to seek ways to use solar power and other renewable forms of energy.

- **Facility Delivery Innovations (Housing Innovations)**

We provide datacenters from the very largest to the very smallest and of various specifications to match customer needs. Working from a modular datacenter concept, rapid delivery of high-quality datacenters matching customer needs is our goal.

- **ICT Platforms**

The ICT equipment for installation in datacenters is constantly evolving. But it is not enough to simply use the latest, most efficient equipment; we search for equipment best suited for use in a datacenter and work with our ICT Equipment Unit to offer datacenters with the best overall efficiency.

- **Energy Procurement Innovation (Energy links between facilities)**

To maintain business continuity, we aim to create datacenters with high energy source independence. We, therefore, seek to ensure a stable supply of power and we consider a variety of energy procurement possibilities, including on-site and nearby facilities.

Initiatives in FY 2012

Contributions to Industry Organizations

Concentrating a customer's ICT assets in a datacenter also contributes as an energy-saving benefit for society as a whole. By actively being involved in working group activities in the various industry organizations related to datacenters, Fujitsu helps to enhance the value of datacenters to society. Citing one example, in particular, Fujitsu is leading efforts to devise and promote the use of PUE (Power Usage Effectiveness) measurement and calculation methods as an industry representative to the Japan Data Center Council (JDCC).

Visualization of Effects

Fujitsu has won approval from the Ministry of Economy, Trade and Industry's J-Credit Scheme (for reduction of CO2 emissions in Japan) for a method for calculating CO2 reductions achieved by switching to a Fujitsu datacenter and for a scheme that will actually issue credits. This makes it possible to visualize a customer's environmental contribution from outsourcing datacenter services to Fujitsu and to credit the customer for that contribution.

Datacenter Solution wins 2013 Datacenter Management and Automation Award in Germany

Fujitsu datacenter solutions won the 2013 Datacenter Management and Automation Award sponsored by Germany's Club Gala. This prize is presented to the datacenter implementation with high energy efficiency and the most outstanding environmental performance.

Fujitsu's datacenter solutions are provided to customers as cloud-based ITMaaS (IT Management as a Service). In providing these solutions, we identify inefficient energy usage at customer datacenters, recommend actions for reducing operating costs and improving energy efficiency, and offer customers cost and energy savings through the automation of their datacenter operations.

Example of the Fujitsu Group's Global Environmentally Conscious Datacenters

The Fujitsu Group has datacenters in over 100 locations across the globe and is vigorously moving forward with the introduction of technologies and facilities that are good for the environment.

Examples of the Fujitsu Group's Global Environmentally Conscious Datacenters



Fujitsu South China Datacenter (China) Est. Apr. 2012

The Fujitsu South China Datacenter is the first datacenter established and owned by the Fujitsu Group in China. Based on the latest technology, this datacenter offers quality equal to the world's highest standards and is equipped with state-of-the-art technologies for energy efficiency. Equipped with an efficient power plant featuring a rotary UPS (Uninterruptible Power Supply), an energy management system that monitors temperature and individual server rack electricity consumption 24/7, an air-conditioning system with geothermal features, a lighting control system, and other energy efficiency innovations, we have done everything practicable to minimize this datacenter's electricity consumption.

Yokohama Datacenter (Japan) Est. Dec. 2010

In establishing the Yokohama Datacenter, we not only equipped it with all of the latest energy-efficient facilities and energy-efficiency management systems; we also used a design that uses server room waste heat to warm office space, uses rainwater to flush toilets, and took other proactive steps as well to help realize a recycling-based society. In recognizing the value of our efforts, the City of Yokohama's Comprehensive Assessment System for Building Environment Efficiency (CASBEE) awarded the Yokohama Datacenter its highest, S, rank. In FY 2012, it also won the Kanagawa Prefecture's 2nd Kanagawa Global Warming Prevention Award in the greenhouse gas reduction performance category.

London North Datacenter (U.K.) Est. June 2008

At the London North Datacenter, in the U.K., we have deployed energy use simulation technology designed to optimize datacenter facility and ICT equipment operations. We have also installed free cooling, high-efficiency UPS, and other technologies to cut facility-related CO2 emissions by about 3,000 tons per year, compared to a conventional datacenter.

Homebush Datacenter (Australia) Est. Oct. 2008

For our Homebush Datacenter, in Australia, we employed a cooling system that combines the reuse of cooling water and a layout optimized for heat flow, and achieved an 80% reduction in water usage and up to a 32% reduction in energy usage, compared to conventional systems. In addition, we reduced energy consumption by up to 60% through the use of centralized equipment controls and sensor-equipped lighting.

Sunnyvale Datacenter (U.S.) Est. Apr. 2010

At our Sunnyvale Datacenter in the U.S., we have taken energy-saving steps like installing an on-site power generation facility that uses hydrogen fuel cells and biofuels.

FeDC (Singapore) Est. Jan. 2009

At the FeDC in Singapore, we have installed a high-efficiency power plant, temperature monitoring system, lighting control system, and other technology to make this facility energy efficient.

Indirect Air Cooling Container Datacenters

With the rapid adoption of ICT and cloud computing in particular, the datacenters that underlie it all are taking on even greater importance. As a new form of datacenter, Fujitsu began in October 2012 to provide "container" datacenters that can be constructed in a short time and used to start operations at a small scale. Because they are relatively small and can be cooled without waste, container datacenters operate with only a small amount of electric power and have low operating costs.

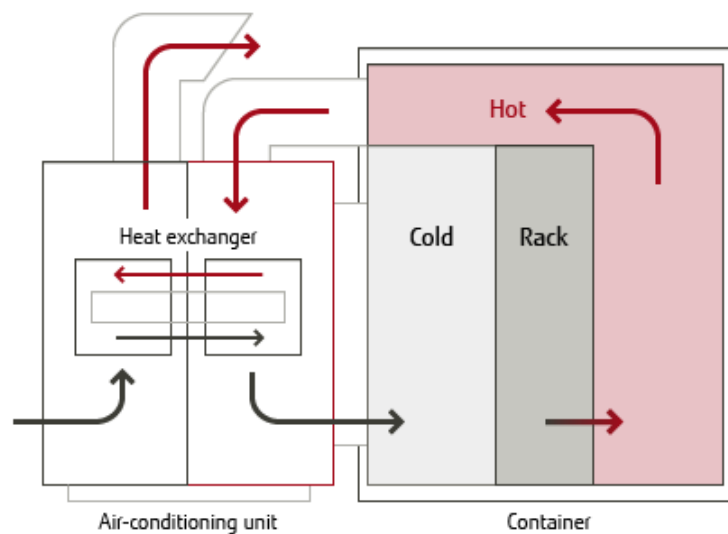
Our container datacenters employ indirect air cooling that takes external air into a heat exchanger and expels air warmed by the ICT equipment. The use of external air reduces the amount of energy needed for air conditioning and eliminates the need to install the external water-cooling equipment required for a water-cooled system. A key characteristic of our container datacenters, therefore, is that they can be installed in any environment or location. In addition, because external air is not taken into the container directly, the system is one that does not require adjustments of humidity and is not subject to the effects of dust or insects.

The ICT equipment and facilities installed in the container are controlled by Fujitsu's own operating and management software. And electricity consumption is minimized through the deployment of electrical system control technology developed by Fujitsu Laboratories Ltd.



Container datacenter

Indirect external air cooling system



Green Procurement with a Centralized Global Procurement System

To provide our customers with products and services that have minimal environmental impact, the Fujitsu Group is promoting green procurement together with our business partners through a centralized global procurement system in an effort to protect the global environment.

Fujitsu Group Green Procurement Direction

The Fujitsu Group has formalized its basic requirements regarding procurement of eco-friendly parts, materials, and products as the Fujitsu Group Green Procurement Direction, and is moving forward with green procurement activities together with business partners inside and outside Japan.

- [Fujitsu Group Green Procurement Direction](#)

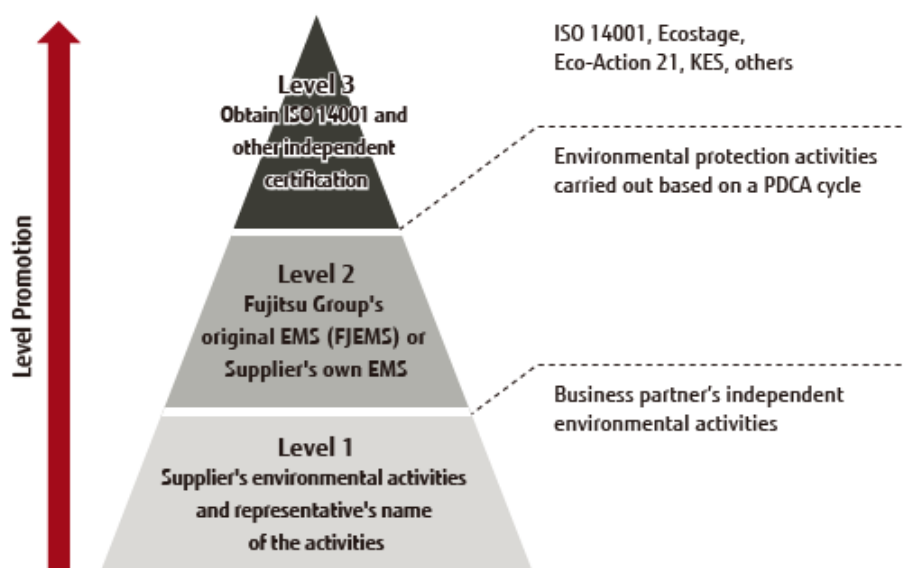
Green Procurement Requirements for Our Business Partners

We request that our business partners meet the following requirements to promote green procurement.

Establishment of Environmental Management Systems*1

We request our business partners to establish an EMS to ensure that they continuously implement environmental burden reduction activities. We also conduct regular surveys to determine their EMS level (Refer to the following diagram.) . For business partners whose survey responses indicate a level 1 EMS, we will provide the Fujitsu Group's original EMS (FJEMS*2) and support efforts to bring the business partner's EMS up to the third-party-certified EMS (level 3).

Establishment of EMSs for Green Procurement



*1 EMS:
Environmental management system

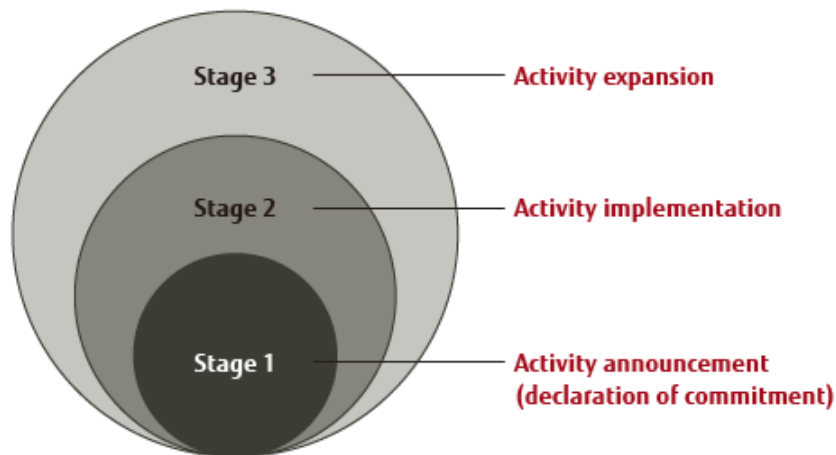
*2 FJEMS:
The Fujitsu Group's own EMS, which focuses on ISO14001 requirements and getting environmental protection activities based on a PDCA cycle to take root.

Promoting Efforts to Limit or Reduce CO2 Emissions and to Conserve Biodiversity

One of our goals under the Fujitsu Group Environmental Protection Program (Stage VI), which covered the period FY 2010-2012, was to increase to 100% by FY 2012 the number of our parts business partners taking action to limit or reduce their CO2 emissions and to preserve biodiversity. Toward that end, therefore, we asked our business partners to get to at least stage 2, activity implementation, regarding the limitation or reduction of CO2 emissions, and to stage 1, declaration of a commitment, regarding the protection of biodiversity.

Drawing Up an Activity Evaluation Index

We set up an original three-stage index for measuring the situation of our business partners' activities and requested their cooperation.



We have actively helped our business partners to determine what activities they should be taking and reach the point of being able to do so. We have, for example, provided tools for calculating CO2 emissions from electricity usage and for monitoring progress toward quantitative targets. We have also prepared guidelines providing basic information on protecting biodiversity along with explanations and examples of biodiversity protection activities, and created a check tool to promote awareness of biodiversity protection.

To encourage business partners to take notice of issues related to CO2 emissions and biodiversity, we have also held seminars in which we explained the need for action, provided examples of what could be done, and led participants in exercises. During the FY 2010-2012 period, we held eight of these seminars with participation by a total of 75 companies.

For our overseas business partners, we have provided explanations of the issues that companies throughout the world should be addressing and gained understanding while supporting their activities. As a result of our efforts, we fully achieved the goals mentioned above for our business partners inside and outside Japan in January 2013.

Participatory Environmental Protection Activities for Business Partners

With positive feedback from the FY 2011's environmental protection activity with business partners, Fujitsu's Purchasing Unit held the event again, in October 2012, at the Higashi Toyoda Nature Preservation Area in Hino City, Tokyo. The impetus for sponsoring these activities was to give as many business partners as possible an opportunity to initiate their own activities to protect biodiversity.

Business partner participants included 22 people from 10 companies. With Fujitsu employees bringing the total to 40, participants set to work cutting bamboo grass and thinning the forest. While walking through the preserve, they also deepened their understanding of the relationship between people and nature by listening to a lecture, by the staff of an NPO, on the protection of biodiversity. Such opportunities to engage with business partners outside of strictly business-related settings also help to strengthen our relationships with them.



Environmental protection activities

Objectives of Fujitsu Group Environmental Action Plan (Stage VII)

In the Fujitsu Group Environmental Action Plan(Stage VII), which began in FY 2013, the Fujitsu Group acknowledges that the limitation or reduction of CO2 emissions upstream in the value chain is an important issue that companies should address. We, therefore, will expand our environmental protection activities to include solution services and other non-component business partners. Regarding the conservation of biodiversity in particular, we will continue with our supplier-focused activities to reinforce the importance of protecting biodiversity, and pursue green procurement activities together with business partners.

Establishment of Chemical Substances Management Systems (CMS^{*3})

We request our business partners to establish a chemical substances management system (CMS) based on the industry standard, JAMP^{*4} guidelines on management of chemical substances contained in products. If their management system is inadequate when we audit their manufacturing sites for parts supplied to the Fujitsu Group, we will provide support for correctional efforts that aim to strengthen their management system in the supply chain. Once business partners have been recognized as having established a CMS, we periodically check the operational status of the system. The Fujitsu Group will continue CMS development efforts of this kind to ensure that strict legal compliance is maintained.

^{*3} CMS:

Chemical substances management system

^{*4} JAMP:

[Joint Article Management Promotion-consortium](#)

Collaborating with Business Partners in Management of Chemical Substances Contained in Products

In order to comply with new chemical regulations in Japan and globally, starting with Europe's REACH regulations, we started surveys in June 2011 based on the AIS*[5](#) and MSDSplus*[6](#) formulated by JAMP. Ahead of the surveys, in May, we held seminars on creating AIS sheets for 73 processing-related business partners in Japan. In June, we also held seminars for 17 business partners in greater China. The seminars included computer-based study and instruction on how to prepare AIS sheets.

Surveys are conducted when products are designed, designs are changed, or there is a change in business partners. In addition, following the release of AIS (MSDSplus) Ver.4.0, the Fujitsu Group made approximately 12,000 requests to business partners to complete new chemical substance surveys based on the latest AIS during FY2012.



Seminar held in Japan

ProcureMART*[7](#), the Fujitsu Group's solution for online procurement, is used to connect the Fujitsu Group with its business partners, which enables purchasing activities and chemical substance surveys to be conducted with a single interface. Management of chemical substance information sent from business partners is accomplished by utilizing another Fujitsu Group solution, PLEMIA/ECODUCE*[8](#), and the information is shared within the Group.

The Fujitsu Group is actively involved in standardization activities for green procurement surveys being promoted by industry bodies like JAMP. We intend to continue raising the efficiency of such supply chain surveys going forward.

***5 AIS:**

Information transmission sheet for conveying information on chemical substances in molded products.

***6 MSDSplus:**

Information transmission sheet for conveying information on chemical substances in chemicals and preparations.

***7 ProcureMART:**

Service that allows procurement processes for production materials to be conducted online.

***8 PLEMIA/ECODUCE:**

Fujitsu's chemical substance management system

Raising Product Value with Environmental Technologies (Soliciting Proposals for Environmental Technologies)

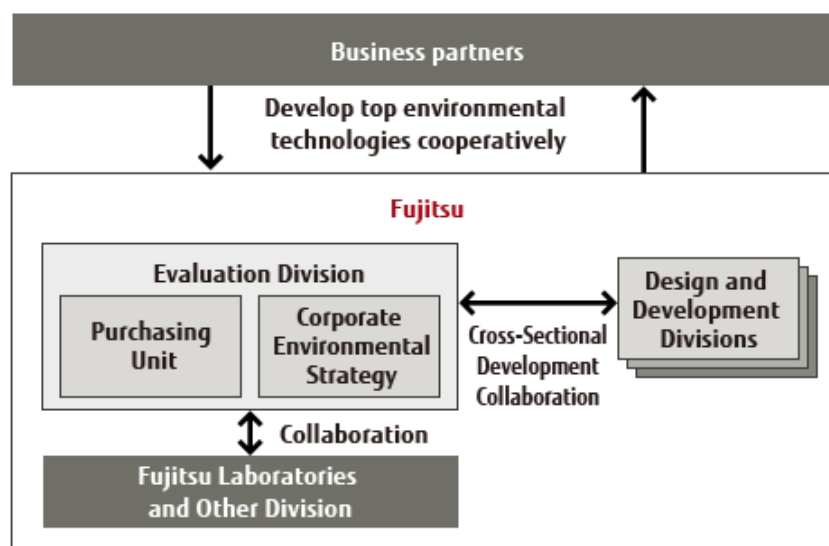
Fujitsu asks its business partners to propose environmental technologies and materials to achieve Green Policy Innovation, our project to help customers reduce their environmental impact using Green ICT.

Proposals made by business partners are evaluated in our evaluation divisions and exceptional proposals are forwarded to our design and development divisions with recommendations for timely and extensive adoption. All information is stored in an internal database that can be accessed and further developed across Fujitsu. We remain committed to proactively adopting outstanding environmental technologies and materials, and will continue to develop and promote products with exceptional environmental performance.

Please refer to the following link for details on the types of environmental technologies Fujitsu is seeking and how proposals are made.

- [About the Environmental Technologies Proposal Application](#)

Infrastructure for Achieving Green Policy Innovation



Environmental Considerations in Transportation

We are promoting the rationalization and streamlining of logistics in our whole global supply chain and working to reduce transport-related CO2 emissions.

Promoting Global Green Logistics Activity

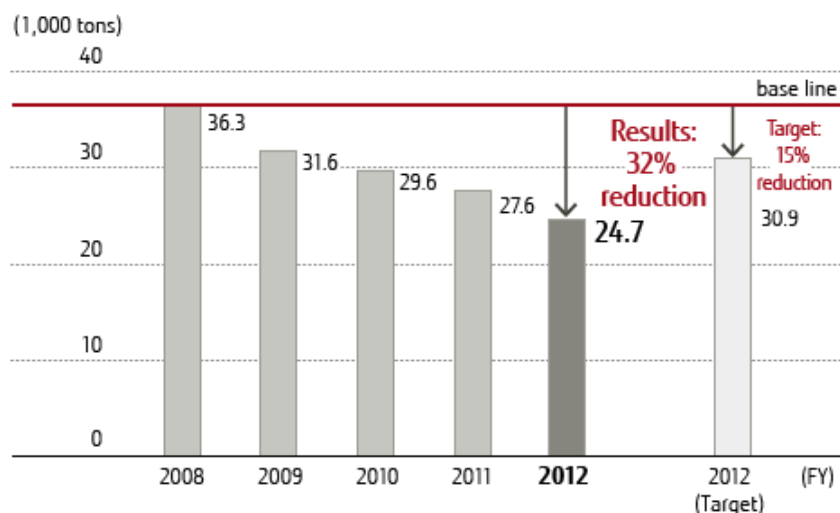
We are working on Green Logistics Activities that aim to reduce CO2 emissions associated with transportation through coordination among the logistics divisions of all Group companies, and cooperation between manufacturing and sales divisions.

In FY 2011, we created the Fujitsu Group Green Procurement Standards which encapsulate Fujitsu's ideas on green logistics and its specific requests to suppliers. The purpose of these standards is to promote green logistics activities with our suppliers and with the foundation provided by these standards, we will strengthen our relationships with suppliers and strive to reduce the environmental burden associated with distribution across the whole supply chain.

- [PDF Fujitsu Group Green Logistics Procurement Direction Edition1.0 \[In Japanese\]](#) [253KB]

Toward achievement of the goal to reduce CO2 emissions from domestic transport by 15% below FY 2008 levels by the end of FY 2012, as proposed in the Fujitsu Group Environmental Protection Program (Stage VI), we expanded modal shifts and reduced the number of trucks used. As a result, by the end of FY 2012, we were able to achieve an emission of 24,700t, a reduction of 32% (this includes fluctuations in amounts distributed and the effects of the March 2011 earthquake) compared to FY 2008.

Trends in CO₂ Emissions from Domestic Transportation in Japan (Fujitsu Group)



Fujitsu Group Environmental Action Plan(Stage VII)

Under the Fujitsu Group Environmental Action Plan(Stage VII), the Group is promoting green logistics activities for transportation within Japan, for intra-region transportation outside of Japan, and for international transportation to achieve the goal of reducing CO2 emissions per sales from logistics over 4% compared to FY 2011.

Expanding Modal Shifts

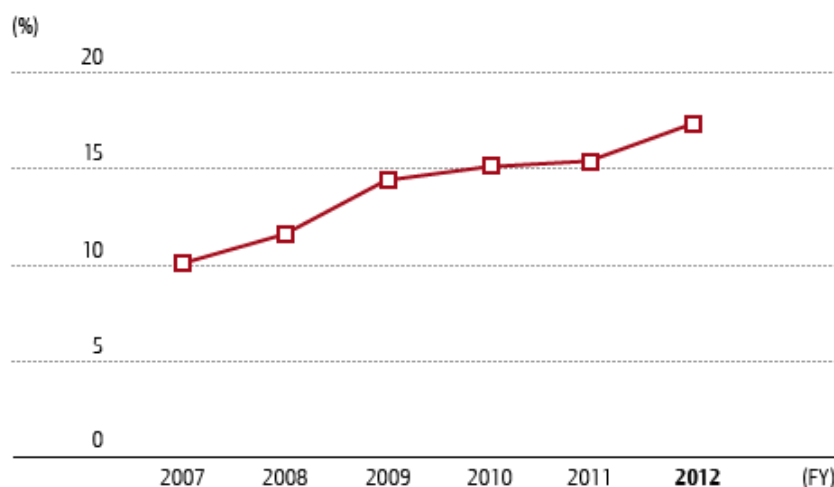
The Fujitsu Group is working to reduce CO2 emissions through an ongoing modal shift. This entails effectively utilizing rail transport and shifting from air to ground transport in everything from parts procurement to product transport.

In FY 2012, we widened our use of rail transport by expanding the rail-based shipment of mobile phones for not only NTT DOCOMO, INC. and KDDI Corp., but also SoftBank Mobile Corp.

In the area of personal computers for individuals, we shifted, in October 2012, from truck to rail transport for shipments from Fujitsu Isotec Limited and Shimane Fujitsu Ltd. to the Tokyo Distribution Center.

Since acquiring the Eco Rail Mark certification in March 2010, we have continued to vigorously promote the use of rail transport.

Modal Shift Percentage in Japan (Fujitsu)



FDK Corporation is working to reduce CO2 emissions from logistics by shifting from trucks to rail transport for the movement of goods between its Sanyo Plant (Yamaguchi Prefecture) and Kosai Plant (Shizuoka Prefecture). Products are shipped from the Sanyo Plant to the Kosai Plant, which then uses rail on return trips to send returnable boxes back to the Sanyo Plant. FDK also changed the way products and returnable boxes are packed and loaded to improve loading efficiency.



Products loaded into a rail container

Reducing Truck Numbers

In August 2012, we began to share truck space with other electronics manufacturers for shipments of products to the distribution centers of major retailers in some parts of Japan. This increased truck loading efficiency and reduced the number of trucks used.

We also reduced the number of trucks for delivering service parts by changing the logistics networks among parts centers in Tokyo, Minami Machida, Chiba, Yokohama area and delivery to Customer Engineers (CEs).

International Transport Initiatives

The Fujitsu Group began measuring CO2 emissions from international transport in FY 2008, and is now actively working to reduce CO2 transport emissions.

Our activities include modal shifts (shifting from air to ocean transport), shortening transport distances, raising container loading ratio, and reducing air transport frequency.

Initiatives at Group Companies

At major group companies in Europe, North America and APAC, we began in FY 2011 to measure CO2 emissions from international and regional transport. We have been promoting green logistics activities with logistics partners and with the cooperation of customers.

Using Low-Emission Vehicles to Cut Shipping-Related CO2 Emissions

U.K.-based Fujitsu Services (FS) began in 2012 to use fuel-efficient low-emission vehicles equipped with idling-stop functions as delivery vehicles for service parts.



Low-emission vehicles

Cutting Distance Traveled and Increasing Loading Efficiency by Reducing Emergency Shipments

By adjusting service part inventories at parts centers, FS has also reduced the distance traveled to deliver service parts. When parts are not needed immediately, shipments are rescheduled to the next day to concentrate shipments. Furthermore, appropriately sized vehicles are used to increase loading efficiency.

Promoting Modal Shifts (Shifting to ground transport from air transport)

Hong Kong-based Fujitsu PC Asia Pacific Ltd. (FPCA) has begun to shift from air transport to ground transport for the shipment of procured items from Shanghai to Hong Kong. This not only reduces CO2 emissions but also helps to lower costs.

Packaging and Container Loading Improvements

When Fujitsu Australia (FAL) needs to ship multiple, separate products to customers, it consolidates the packaging on a customer-by-customer basis. This activity helps reduce use of packing material and improve transport efficiency.

Reducing the Use of Cardboard and other Packaging Materials

To reduce the whole environmental burden of the distribution process, we are promoting 3R^{*1} efforts for packaging products and parts.

Reducing the Use of Cardboard and other Packaging Materials

The Fujitsu Group has been replacing cardboard and other materials used to package products with reusable alternatives. This has reduced the use of cardboard and other cushioning packaging materials.

In addition, returnable containers have been adopted for use in shipping products to and from Fujitsu's service centers. The use of reusable packaging materials, rather than single-use cardboard and foam cushioning materials, reduces waste and lowers the burden on the environment.

^{*1} 3R:

Reduce, Reuse, and Recycle

- [Eco-Friendly Packaging](#)



Returnable container for IA Servers

Providing Cloud Services to Support Organizations Working to Conserve Biodiversity



Human beings live on blessings - water, food, wood, fiber, etc. - derived from countless other living beings. The Earth's abundant biodiversity, however, is rapidly being lost as a result of habitat destruction, ecosystem changes, and other impacts of human activities.

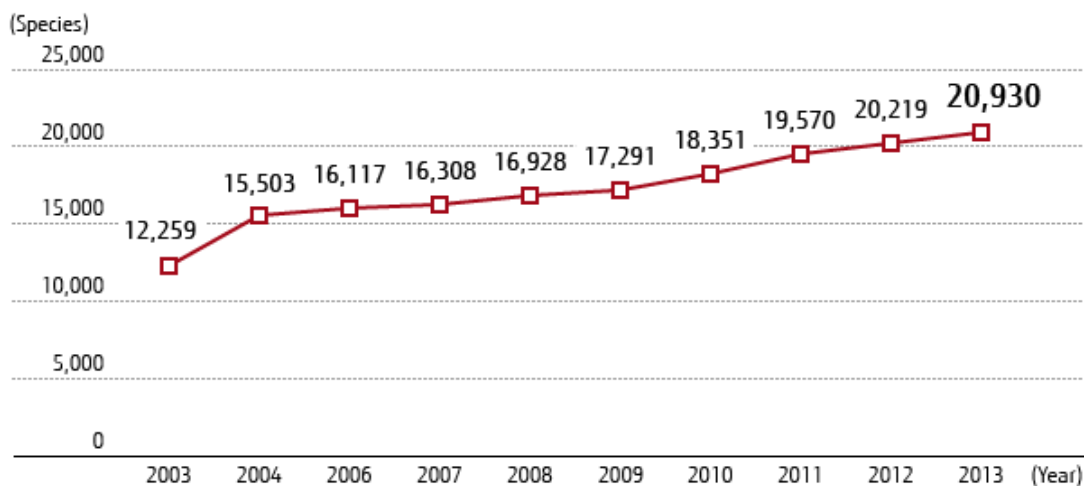
As national and local governments, NPOs, and various other actors expand their activities aimed at conserving biodiversity, Fujitsu is providing cloud services free of charge to support their work.

Rapidly Declining Biodiversity

At present, it is estimated that there are as many as 30 million species of life on the Earth, and human life enjoys the benefits of that diversity. In 2012, however, it was determined that the number of the world's species in danger of extinction had risen to 20,930, from 12,259 ten years earlier. The speed of species extinction, in other words, is accelerating^{*1}.

With species extinction a growing concern, the Convention on Biological Diversity's 10th meeting of the Conference of the Parties (COP10) adopted the Aichi Targets on global biodiversity^{*2}. To stop the loss of biodiversity by 2020, these targets call for national and local governments, NPOs, and various other actors to take effective, immediate action.

Global Trend of Threatened Species



Source: Prepared by Fujitsu based on the "Numbers of threatened species by major groups of organisms (1996-2013)," published by the International Union for Conservation of Nature (IUCN).

*1 Threatened species:

Please refer to the [PDF "Numbers of threatened species by major groups of organisms \(1996-2013\)." \[108KB\]](#) published by the IUCN.

*2 Aichi Targets:

Formerly known as the "Strategic Plan for Biodiversity 2011-2020."

Issues on the Frontlines of Biodiversity Conservation

Employing a PDCA cycle - including stages like formulating a biodiversity conservation strategy and checking the effectiveness of biodiversity actions - requires detailed and accurate knowledge of the distribution of the conservation area's wild plants and animals.

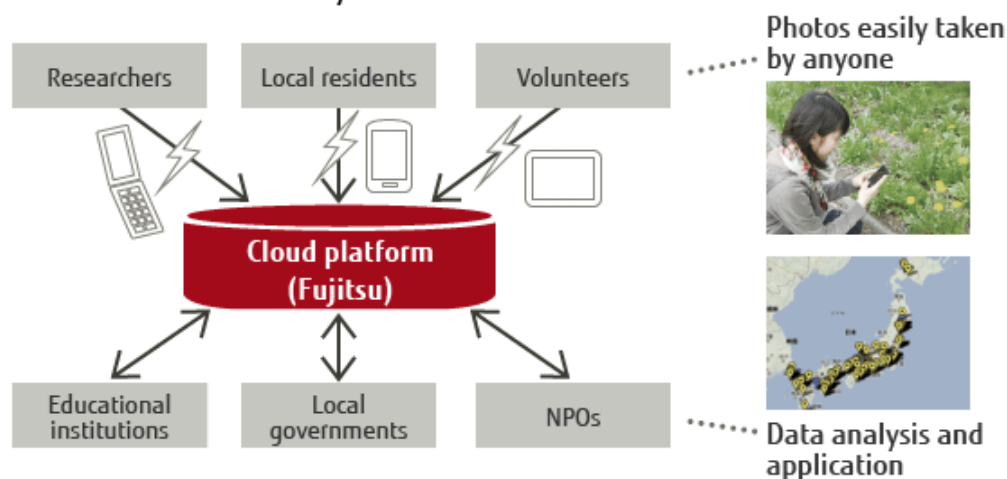
For example, investigating the invasive and native distributions of a certain plant traditionally required that experts physically go to the study location and record data, such as the names of species, locations, and times. That approach, however, faces limitations in terms of the people who can carry out the study and the geographic area that can be covered. It also involves the tedium of numerous procedures that must be followed for collecting and sorting information.

Building a Scheme for Broad-Based Public Participation in the Cloud

Fujitsu, therefore, wanted to have conservation workers apply ICT to reduce the tedium and number of procedures involved in biodiversity surveys, and increase the efficiency and effectiveness of conservation activities.

We created the Mobile Photo System cloud service, which allows anyone to easily conduct surveys using Fujitsu's cloud platform, and a mobile phone or smartphone, from anywhere. With this service, a person conducting a survey photographs an animal or plant and sends it by email to an address where the photograph is added to a database. Experts can then examine the data and identify species, and the data can be viewed and analyzed on a map. This service enables broad-based public participation in the provision of data.

Overview of a Mobile Photo System and Cloud Services



Cloud Services are being Used by Various Organizations Working to Conserve Biodiversity

Fujitsu began providing these services, in 2011, to the Aichi University of Education for a nationwide survey of dandelions and to Kawasaki City for a survey of vegetation along the Tama River, and, in 2012, to Kawasaki City for conservation activities in the Kuriki Greenery Conservation Area.

In addition, to promote biodiversity conservation initiatives, we began in April 2013 to expand provision of these services by making them available to local governments, universities and other educational institutions, NPOs, and other organizations through a public application process. Large amounts of data have already been collected and posted on the following web sites.

- [Biological Information Collection System \(in Japanese\)](#)

VOICE

Use of Fujitsu Systems for a Citizen-Participation Natural Environment Baseline Survey for Formulation of a Biodiversity Regional Strategy in Kurashiki City

Yasuhiro Miyake, Environmental Affairs Policy Section, Kurashiki City

Kurashiki City is in the midst of formulating a regional biodiversity strategy, and we believe this system will make it easy to gather from the citizenry-at-large the biodiversity information needed to formulate our strategy. We have only just begun, so we have no concrete results yet, but we have been covered by the media several times and have seen signs that the system, as one that involves citizens, is generating a great deal of interest. There are expectations that using the new system will lead to some kind of new discovery.



VOICE

National Census of Bumblebees

Masakado Kawata, Graduate School of Life Sciences, Tohoku University

We are conducting a survey to determine the current distribution of bumblebees, which play a very important as pollinators. We have received media coverage from not only local but also national newspapers and many people have taken an interest in our survey. In less than a month, we have already received 300 data submissions and are anxious to see just how the total will rise. The request to send images with GPS data, however, has proven to be a hurdle for many people. The percent of people sending photos without GPS data to a different address is high, so it would be nice to have a special app for those cases.



VOICE

Animal and Plant Distribution Survey and Species Monitoring by the Tokyo College of Environment at its Fieldwork Location

Masaaki Kohmaru, President, Tokyo College of Environment

Information on when, where, and the kind of species identified is indispensable for understanding nature, and obtaining this information constitutes the valuable work of the naturalist. Our aim - to gather biological information on all species in Japan - is ambitious, and, as an initial step, we have chosen 30 animal and plant species and begun to conduct a survey at our fieldwork location in the town of Masuho in Yamanashi Prefecture. We are looking forward with great anticipation to the results of our combination of state-of-the-art technology with the primitive survey approach of applying all five senses to physically find species.



Survey with Participation Open to All

The Mobile Photo System cloud services allow anyone to participate in our survey by using a smartphone or mobile phone. The accuracy of the survey will rise with the amount of data collected, and we welcome participation from as many people as possible, so that we can ultimately implement conservation activities that are best-suited for their purposes. We also believe that going out into the field to look for species will encourage participants to feel closer to them and think about the decline in biodiversity.

Activities of Organizations Using the Mobile Photo Cloud Service (No particular order)

No.	Activity and Organization Name	Activity Summary
1	Search for dandelions!	This project is gathering data on and creating a map showing the extent of dandelion distribution in Japan. In addition, by having participants come into contact with the natural environment and learn about dandelions, the dandelion survey is also an opportunity for participants to develop their understanding of the importance of biodiversity conservation.
	Aichi University of Education, Mikio Watanabe's laboratory	
2	Tama River Vegetation	Through citizen, government, and business cooperation, vegetation found along the Tama River is being recorded and information is being shared to investigate the characteristics of vegetation in this riverine environment.
	Kawasaki City	
3	Kawasaki City Kuriki Greenery Conservation	A woodland is being rehabilitated based on the Kuriki San'noyama Special Greenery Conservation Area Management Plan created by Kawasaki City and Fujitsu's Kawasaki Plant. The change brought about to the ecosystem through rehabilitation work is being studied.
	Kawasaki City and Fujitsu's Corporate Environmental Affairs Unit	
4	Hakusan Non-native Plant Species Initiative	With the help of volunteers, this activity is identifying and eliminating distributions of plantain and other invasive plant species in Hakusan National Park. National and prefectural governments, and the management association are working together to deal with the difficult problem of eliminating invasive species.
	Chubu Regional Environment Office of the Ministry of the Environment, Hakusan Ranger Office for Nature Conservation	
5	Survey of Living Things in the Chita Peninsula Green Belt	On the Chita Peninsula of Aichi Prefecture, businesses, students, and local residents are working to protect the area's plants and animals by conducting a survey and creating a map of Chita Peninsula plants and animals. Businesses are aiming to work together to build an ecosystem network for the entire Chita Peninsula.
	Intertwined Life Project Office	
6	Search for Kurashiki Plants and Animals	In this activity, any citizen-participation survey will be conducted to gather information on plants and animals in the Okayama Prefecture city of Kurashiki. The activity is intended to determine the status of the natural environment within the city and enlighten citizens. A Regional Biodiversity Strategy will be developed.
	Kurashiki City	
7	National Census of Bumblebees	Focusing on the important role played by flower-visiting insects in ecosystems, this activity is enlisting the cooperation of people throughout Japan in recording data on the activities of bumblebees found in the field. It will not only clarify the movements of bumblebees but also enlighten citizens.
	Graduate School of Life Sciences, Tohoku University	
8	Woodland Plants and Animals in Tsushima	To conserve the unique ecosystem of Tsushima, this activity is conducting a citizen-participation survey of plants and animals in areas hosting the Tsushima leopard cat and other endangered species. It will investigate human activities and the woodland environment.
	MIT	
9	General Survey of the Natural Environment of the Tokachi Coastal Wetlands	This activity is undertaking a general survey (employing the Flowerthon method) of the natural environment of the Tokachi coastal wetlands, which are registered under the Ramsar Convention on Wetlands of International Importance. The survey is being conducted from multiple perspectives, including human activities and cloud observations.
	The Wetlands Institute of Northeastern Asia	

No.	Activity and Organization Name	Activity Summary
10	TCE Animal and Plant Species Habitat Distribution Survey	Using a plant and animal survey tool as a field work curriculum, this activity seeks to enlighten students and test the practicality and extensibility of the tool. The activity will foster human resources who will engage in natural environment conservation in the future.
	Tokyo College of Environment	
11	Honeybees were here! Great Survey	This activity is investigating how people relate to nature via honeybees. It is enlisting the cooperation of citizens, schools, beekeepers, and others in conducting a survey of the flower-visiting activity of honeybees in areas including the Tokyo cities of Kunitachi and Machida, and the town of Fujimi in Nagano Prefecture. It is also using the familiar honeybee as a vehicle for contributing to environmental education.
	A Thousand Flowers for Bees, an NPO registered in Japan	
12	Woodland Living and Biodiversity	In this activity, a citizen-participation survey is being conducted of insects, amphibians, birds, and other forms of life in Uonuma City, Niigata Prefecture. By also covering medicinal plants, the survey is investigating the relationship between people and woodlands, as well.
	ECOPLUS, an NPO registered in Japan	

Conservation of Biodiversity

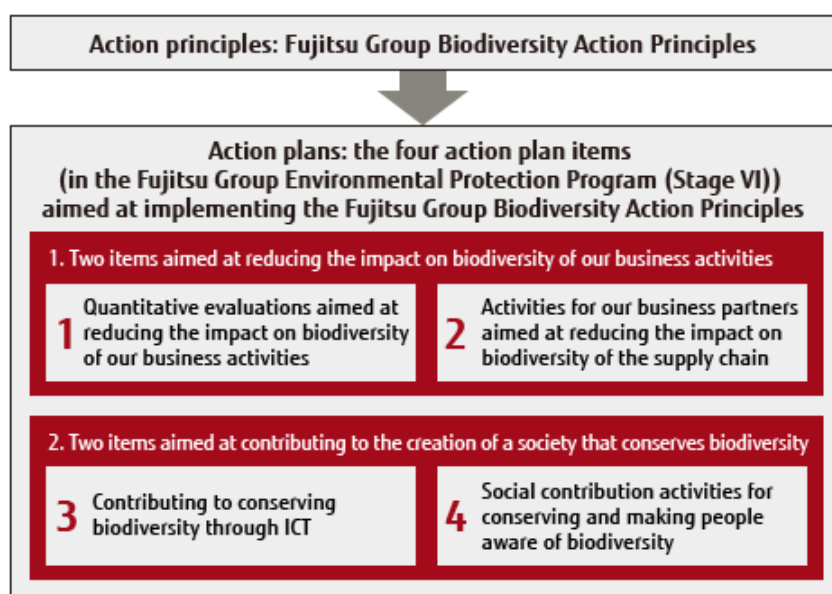
We have set conservation of biodiversity as one of our most important priorities, and are promoting activities toward that end.

Our Approach

Only the bounty of nature makes our daily lives possible. From the provision of food and forests, to climatic regulation, water purification and recreation, the value to humankind of the functions nature performs is incalculable. These functions are called "ecosystem services," and they depend on biodiversity. The recent significant deterioration of ecosystems makes conserving biodiversity an urgent necessity to ensure sustainable ecosystem services.

Given this background, we set conserving biodiversity as one of our most important priorities and became a signatory to the leadership declaration for the Business and Biodiversity Initiative at the ninth meeting of the Conference of the Parties (COP 9) to the Convention on Biological Diversity (CBD), held in May 2008. Furthermore, we set a goal of promoting specific efforts by 2020 for all of the items proposed in the leadership declaration.

To achieve that goal, we settled on the Fujitsu Group Biodiversity Action Principles in October 2009. In this, we introduced both (1) Pursuing the Conservation of Biodiversity and the Sustainable Use of Natural Resources in Business Activities and (2) Contributing to Building a Society that Ensures the Conservation of Biodiversity and the Sustainable Use of Natural Resources as themes for future efforts. We then established four related action plan items in the Fujitsu Group Environmental Protection Program (Stage VI), which started in FY 2010, and have diligently worked to implement them.



- [Fujitsu Group Biodiversity Action Principles](#)

Furthermore, toward the achievement of two corporate citizenship targets "social challenges" and "social activities" under the Fujitsu Group Environmental Action Plan(Stage VII), which began in FY 2013 - employees are working with various organizations to apply ICT to the monitoring of species; working to conserve forests and woodlands near populated areas, and advancing other biodiversity conservation activities.

Initiatives in FY 2012

Quantitative Evaluation of Impacts on Biodiversity

To determine how our business activities impact biodiversity, we constructed the Fujitsu Group Biodiversity (BD) Integration Index in FY 2010 and have been evaluating the degrees to which our main business areas impact biodiversity. In FY 2012, we determined that this impact had declined by 9.6% compared to FY 2009, because of a reduction in our energy resource consumption. Going forward, we will continue to use the BD Integration Index as an indicator of the biodiversity impacts of our business activities.

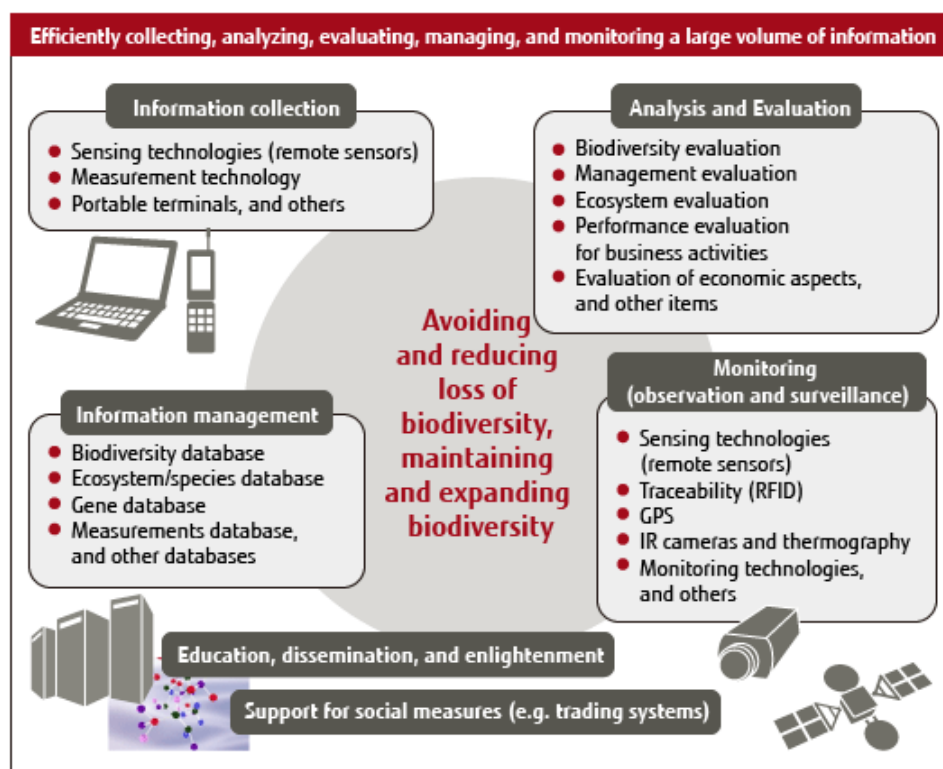
Advancing Biodiversity Conservation Activities

To contribute to the building of a society that conserves biodiversity, Fujitsu has engaged in activities that use ICT to advance biodiversity conservation activities. Examples include the use of a multi-sensing network to protect the Japanese crane and the application of voice recognition technology in research on the Blakiston's fish owl. Furthermore, in pursuit of the Fujitsu Group Environmental Action Plan (Stage VI) goal of undertaking environmental and social contribution activities (once a year in Japan and once every three years overseas), we have also conducted rainforest revitalization activities on the Malaysian island of Borneo, forest and woodland conservation activities throughout Japan, and other biodiversity conservation and education activities at all 434 of our business sites across the globe.

Contributing to the Conservation of Biodiversity Using ICT

The use of ICT makes it possible to avoid or reduce losses of biodiversity, and help to maintain or expand populations of species. It does this by enabling the proper gathering, analysis and evaluation, and management of complex, wide-ranging data relating to the conservation of biodiversity. Applying ICT in this way, the Fujitsu Group has developed a mobile photo system, which it is using to support a nationwide survey of dandelions and a survey of vegetation along the Tama River. Meanwhile, at a vineyard and winery in Yamanashi Prefecture, we are using a multi-sensing network to help boost productivity in agriculture, a form of the ecosystem service of provisioning.

The Possibility of Conserving Biodiversity through ICT



In FY 2012, we embarked on the following efforts applying ICT to help conserve biodiversity.

- [Fujitsu provides free cloud service to ten organizations involved in biodiversity conservation activities \[Press Release\]](#)
- [Fujitsu uses ICT to support study of Blakiston's fish owl habitat in eastern Hokkaido \[Press Release\]](#)

Other Ongoing Fujitsu Group Initiatives:

- [Agricultural support activities at a vineyard and winery in Yamanashi Prefecture \(in Japanese\)](#)
- [Japanese crane conservation activities near the Kushiro wetlands](#)
- [Survey of vegetation along the Tama River using a mobile photo system](#)

Biodiversity Conservation and enlightenment activities

Promoting Tropical Rainforest Restoration Activities in Malaysia

To contribute to biodiversity conservation from a global perspective, we have implemented tree planting activities in Thailand, Vietnam, and Malaysia. Currently, at the Fujitsu Group Malaysia Eco-Forest Park, we continuously call for volunteers to assure that the saplings planted grow into a tropical rainforest, and we also perform supplementary plantings and maintenance.

At the Fujitsu Group Malaysia Eco-Forest Park, located in the Malaysian state of Sabah on the island of Borneo, we have been pursuing a tropical rainforest revitalization project with the support of a Sabah state forest development public corporation since 2002. This project is used as a place where people from the Fujitsu Group can come together from across the globe to work on the conservation of biodiversity. In FY 2012, Fujitsu Group employees and their families, a total of 64 people from seven countries - the U.K., Holland, Australia, China, Canada, Malaysia, and Japan - participated in this project under the slogan, "shaping tomorrow with you," the Group's brand promise. Together with local university students, students and parents from a school for Japanese, and others numbering approximately 100 in all, they worked up a good sweat performing supplementary plantings and maintenance. They also toured a tropical rainforest and mangrove forest to learn about biodiversity. Though unaccustomed to working outside in temperatures exceeding 30°C was extremely trying, involvement in an activity for protecting a tropical rainforest was of immense significance for the participants.



Performing forest maintenance work



Planting trees



Local stakeholders and Fujitsu employees

Fujitsu CoWorCo Limited conducted its Eco-Forest Campaign in FY 2009 and FY 2010, donating funds to the Fujitsu Group Malaysia Eco-Forest Park based on the volume of used toner cartridges it collected. In August 2011, funds collected in FY 2009 were used to construct a summer house where Eco-Forest Park workers can take breaks, and, in November 2012, funds collected in FY 2010 were used to donate 6,000 seedlings and establish the FUJITSU COWORCO'S FOREST. Employees of Fujitsu CoWorCo visited the site in November 2012 to plant trees for the company's forest.



The FUJITSU COWORCO'S FOREST, established in November 2011

- [Tropical rainforest revitalization activities at the Fujitsu Group Malaysia Eco-Forest Park \(in Japanese\)](#)

Tree Planting Activities in Brazil

Fujitsu do Brasil Ltda (FBR), the Fujitsu Group company in Brazil, embarked on a tree planting activity in June 2012 to restore greenery to devastated land. 23 employees participated in the first year of this project. For the participants, most of whom had never participated in tree planting, this activity was very rewarding and an excellent opportunity to learn about biodiversity conservation. The next two years of the project will be spent nurturing the growth of the planted seedlings.



Tree planting site



Tree planting participants

Green Curtain Initiative

To help conserve biodiversity and prevent global warming, the Fujitsu Group pursues its Green Curtain Project at business sites throughout Japan every summer. In FY 2012, 33 Fujitsu Group business sites participated in the project.

A green curtain is made by having climbing plants - like bitter melon, morning glory, or gourd - grow along windows and walls. By adding greenery where there was none, green curtains contribute to local biodiversity and block the sun's hot rays to provide shade that mitigates indoor temperature increases. When bitter melons are grown, the harvest is distributed for free within the company or used by the employee cafeteria to make special summertime dishes. In addition to promoting local production and local consumption, green curtains provide employees with the satisfaction of seeing seedlings they have planted grow day-by-day.

Case Study

Fujitsu Semiconductor Ltd. Akiruno Technology Center

Fujitsu Semiconductor Ltd.'s Akiruno Technology Center created a green curtain that consisted of bitter melon and sponge gourd plants, and was 4.5m high and 60m wide. To make this curtain, employees actively sought to use repurposed items. For example, as a structure upon which the plants could climb, they used netting for the culturing seaweed and, as planter boxes, they used wafer cases no longer needed for their original purpose. As a planting medium, they used soil with plenty of organic matter, which they collected from the center grounds, and fertilizer they made from cafeteria waste. Harvested bitter melons were used by the cafeteria to prepare a dish for employees in an on-site local production / local consumption initiative. In November 2012, the Akiruno Technology Center was named the winner of an award for excellence in the organization category of the city of Akiruno's FY 2012 Green Curtain Contest.

Activity Period: April - September 2012

Activity Location: Akiruno City, Tokyo



Green curtain at Fujitsu Semiconductor Ltd.'s Akiruno Technology Center



Green curtain contest awards ceremony

Case Study

Fujitsu Solution Square

Fujitsu Solution Square has been growing plants for the Green Curtain Project since 2008. This year, the fifth year of this effort, it is growing a total of 336 plants, including bitter melon, sponge gourd, and morning glory. These will be used to green an area now expanded to 260㎡. Fujitsu Solution Square has also made its own original system for using rainwater collection nets to gather rainwater and store it in planter tanks, and increased the number of soil moisture sensors to appropriately water plants. With increasing numbers of employees participating in activities like planting, weeding, and harvesting, green curtain activities at Fujitsu Solution Square have also become an important venue for communication among employees.

Activity Period: May 14 - October 2012

Activity Location: Ota Ward, Tokyo



Fujitsu Solution Square's green curtain

Case Study

Fujitsu Oita Systems Laboratory

In FY 2012, Fujitsu Oita Systems Laboratory, in pursuing its Green Tunnel Project, planted bitter melon, sponge gourd, and morning glory and was later rewarded with a prize in the organization category of Oita Prefecture's FY 2012 Green Curtain Photo Contest. The Green Tunnel helps to save energy through the shade it provides and the transpiration effect, and is soothing to walk through. The large number of bitter melons harvested from the Green Tunnel was distributed to employees, while harvested Japanese morning glory seeds were provided to various regions as part of a "morning glory bank" initiative. Going forward, we aim to use future initiatives to further expand the green curtain movement.

Activity Period: May 11 - September 2012

Activity Location: Oita City, Oita's



Fujitsu Oita Systems Laboratory's green curtain

- [Green Curtain Initiative: Case Study Archives](#)

Contributing to Spreading these Efforts Throughout Society

We participate in external organizations such as the Business and Biodiversity Initiative (B&B) and the Japan Business Initiative for Biodiversity (JBIB) and contribute to the spread of biodiversity conservation efforts throughout society.

At the ninth meeting of the Conference of the Parties (COP 9) to the Convention on Biological Diversity (CBD), B&B inaugurated the event with the signing, by more than 40 companies from around the world, of the "leadership declaration." By publishing their best practices, these companies promote the conservation of biodiversity and sustainable use.

JBIB is a group in which over 30 Japanese companies from a wide range of businesses participate. Its purpose is to deploy activities that contribute to conserving biodiversity by aiming for dialogue between stakeholders and other companies based on the results of joint research. Fujitsu is involved with research activities and tool development for this effort.

Environmental and Social Contribution Activities

All employees of the Fujitsu Group recognize the importance of the global environment and, to assure that the next generation inherits a beautiful planet-wide environment, they contribute to their local community through activities based on the following three pillars: regional contributions, nature conservation and environmental education.

FY 2012 Initiatives

Fujitsu Group business sites throughout the world pursued environmental and social contribution activities, achieving the Fujitsu Environmental Protection Program (Stage VI) goal (1 activity per year in Japan, and 1 activity every three years at overseas sites) at all 434 covered business sites. Results of activities are being shared over the "Act-Local-System" information sharing system, and being used to improve or plan new activities at individual business sites.

Regional Contributions

To maintain local environments and to provide pleasing environments for local residents, we implement regional contribution activities, such as cleanup activities and planting activities at our offices, stores, and plants throughout Japan, as well as at our overseas sites.

We also participate in everyday social contribution activities, such as collecting used plastic bottle caps, stamps and prepaid cards.

Case Study

Cleanup of Kushida Shrine (Kyushu Branch, Hakata-ku, Fukuoka City, Fukuoka Prefecture)

The Kyushu Branch carried out a cleanup of the Kushida Shrine and the surrounding area on December 9, 2012. Employees and their family members, numbering 49 in all, participated.

Kushida Shrine is revered by the people of Hakata as a home for deities who can bestow eternal youth and long life, as well as commercial success. The Hakata Gion Yamakawa festival, which, this year, began early on the morning of July 15, is an exhilarating event that starts at Kushida Shrine.

As they go back to work at the beginning of each new year, local people go to Kushida Shrine and pray for commercial success. To have the shrine ready for the new year and with wishes for the coming new year in mind, a year-end cleanup was organized. This year will be the 10th cleanup, which has now become a winter tradition for the Kyushu Branch.



Cleanup activity at Kushida Shrine



Participating employees and their families

Case Study

Neighborhood Cleanup Activities

(Fujitsu Advanced Solutions Limited, Kanagawa-ku, City of Yokohama, Kanagawa Prefecture)

Fujitsu Advanced Solutions Limited, as a part of its area contribution activities regularly holds cleanup activities for the area around its offices. In FY 2012, it held these activities 13 times with participation by a total of 141 employees.



Cleanup activity



Participating employees

Case Study

Contributing to the Local Area through a Computer Recycling Scheme

(FUJITSU SERVICES HOLDINGS PLC(UK&I), United Kingdom Highlands, Scotland)

FUJITSU SERVICES HOLDINGS PLC(UK&I) pays a refurbishing company £ 300,000 a year to refurbish ICT devices that are no longer being used. It then donates these devices to companies helping to revitalize the local area, children's support groups, and others. This activity prevents the improper disposal of ICT devices and contributes to the local community by providing it with ICT devices.

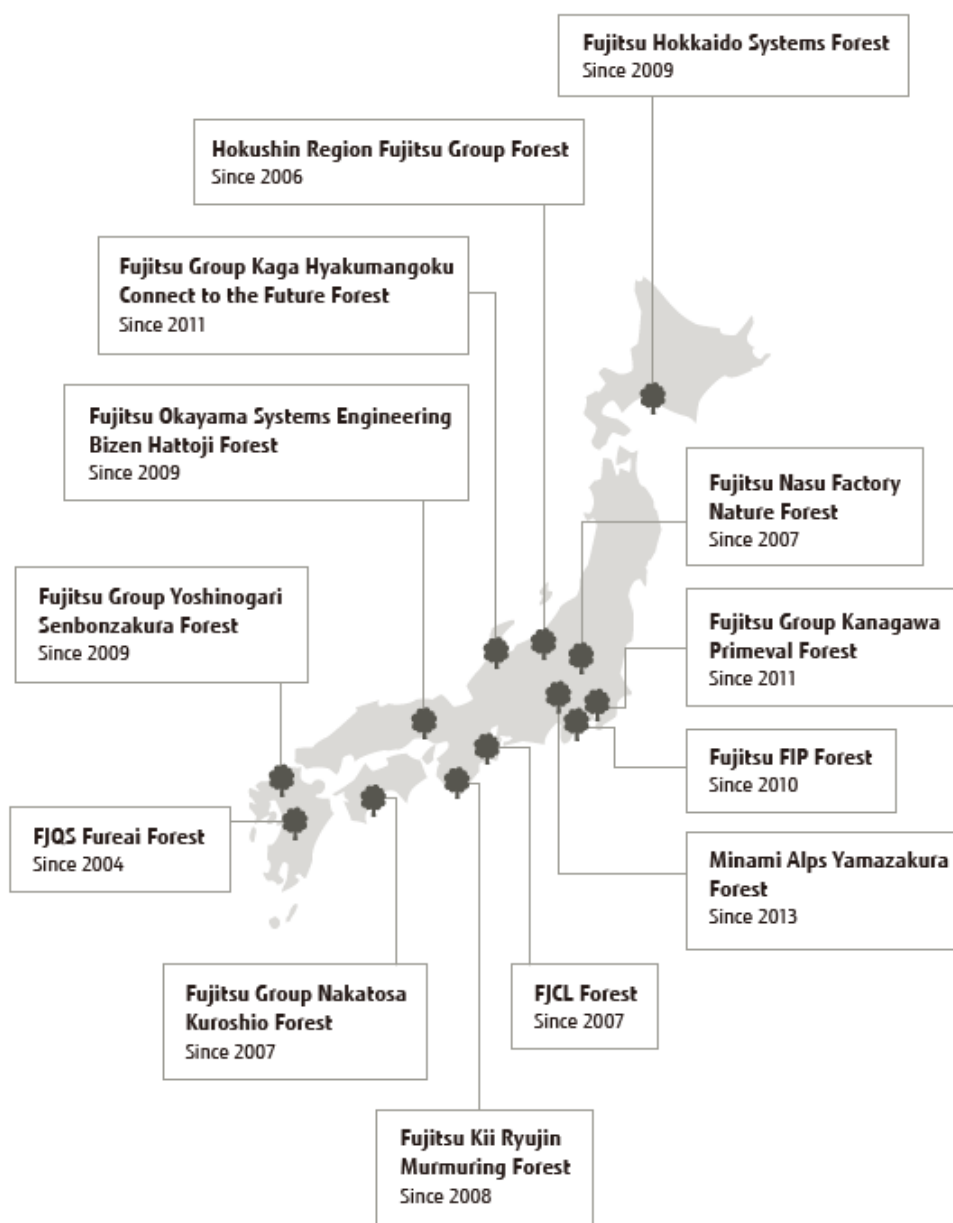
Nature Conservation

The Fujitsu Group is working on forest conservation, urban woodland preservation, seashore cleanup and similar activities to promote the maintenance and recovery of biodiversity and to defend nearby natural environments.

Forest Conservation Activities

The Fujitsu Group carries out forest conservation activities throughout the world. In Japan, 13 locations participate in the "Corporate Forest" program promoted by local governments and implement "Fujitsu Group Forest" conservation activities. The Fujitsu Group also engages in tree planting activities, mainly on business site grounds, that help to conserve biodiversity.

Fujitsu Group Forest



Case Study

Conservation of the Fujitsu Group Kaga Hyakumangoku Connect to the Future Forest

At the Fujitsu Group Kaga Hyakumangoku Connect to the Future Forest, located in the Ishikawa Prefecture Forest Park (Tsubata Town, Ishikawa Prefecture), we conduct forest maintenance activities within unimproved forests and woodlands to deepen understanding of forests and improve the environment in ways that help prevent global warming.

In FY 2012, we trimmed grass in June and August, installed grass and tree cuttings to help prevent erosion in October, and planted 100 kobushi magnolia and mountain maple seedlings in November. A total of 340 people participated in these four activities. Going forward, we will continue to plant trees that will bring color to the mountains in each of the four seasons and create a delightful forest for people who visit.



Planting trees at the Fujitsu Group Kaga Hyakumangoku Connect to the Future Forest

Case Study

Planting Trees in Beijing (BEIJING FUJITSU SYSTEM ENGINEERING CO., LTD.)

As part of its natural environment conservation activities, Beijing Fujitsu System Engineering Co., Ltd. (BFS) conducted tree planting activities in a suburb of Beijing on March 23, 2012. Around one hundred BFS headquarters employees and their families participated, planting a total of 108 seedlings.



BFS employees and family members who participated in tree planting



Tree planting activities

Satoyama Preservation

In Japan today, urban woodlands (or Satoyama) are plagued by a variety of problems, such as abandoned farmland and an increase in invasive species, causing the original Satoyama ecosystem to gradually disappear. The Fujitsu Group undertakes a number of activities aimed at protecting urban woodlands in places like natural parks and greenbelt preservation areas.

Case Study

Participation in Tokyo Greenship Action

Since 2005, Fujitsu has been participating in the Tokyo Greenship Action activities promoted by the Tokyo Metropolitan Government.

In the Kiyose Matsuyama Green Conservation Area, located to the southwest of Kiyose City, 20 Fujitsu group employees and family members came together in November of FY 2012 to repair a wooden fences, and make signs and nest boxes. This conservation area includes mixed woodlands where Japanese red pine is the main species, a young forest of black locust, grassland, and woods with other species, as well. The fundamental goal of Tokyo Greenship Action in this area is to protect to the extent possible the richly biodiverse natural space represented by the lowland forest of Japanese red pine, a species that has become a rarity in urban areas.



Tokyo Greenship Action

Environmental Education and Enlightenment Training Outside the Fujitsu Group

Environmental Education for the Next Generation

In Japan, the Fujitsu Group visits schools to give lessons, in order to make local adults and children aware of the importance of the environment. In FY 2012, we gave lessons at 77 locations, including elementary schools, junior and senior high schools, and community centers, for 4,238 people. Lessons touched on topics such as the "PC 3R" exercise (in which students learn about 3R while dismantling a PC), the My Earth card game (in which students study global environmental problems), and how electricity is produced and ways to measure when it is being wasted. As of April 2013, 79 instructors are conducting lessons in various areas throughout Japan.

Over the seven years since FY 2006, we have conducted 329 lessons for 18,487 people. In addition to the lessons mentioned above, Group companies, plants, and other facilities, have used the special opportunities afforded by their operations to conduct their own lessons on the environment.

On-Site Environmental Classes in FY2012

Class Theme	Classes Given	Participants
PC 3R exercise (learning about 3R while dismantling a PC)	63	3,511
My Earth (card game that teaches about global environmental problems)	7	408
How electricity is produced and how to measure when it is wasted	6	289
Other	1	30
Total	77	4,238



Chouhouji Elementary School, Nagaokakyo City, Kyoto Prefecture (Personal computer recycling)



Ueki Junior High School, Nogata City, Fukuoka Prefecture (Personal computer dismantling)



Hamagawa Elementary School, Shinagawa Ward, Tokyo (My Earth)



Wakamatsu Elementary School, Sagami City, Kanagawa Prefecture (Production of electricity)

Breakdown of On-Site Environmental Classes in FY2012

Date		Requesting Party	Content	Participants
May 8	Tu.	Takaoka Junior High School, City of Kanazawa, Ishikawa Prefecture	Production of electricity	23
May 13	Su.	"Fureai Environmental Exhibit" Numazu Plant Environmental Event	PC dismantling	30
June 5	Tu.	Yokosuka Otsu High School, Kanagawa Prefecture	PC dismantling	16
June 8	Fr.	Minamino Kimita Elementary School, Hachioji City, Tokyo	PC recycling	113
June 15	Fr.	Higashi Azuma Elementary School, Sumida Ward, Tokyo	My earth	69
June 21	Th.	Kohoku High School, Tokyo	PC dismantling	70
June 23	Sa.	Fujitsu Hokuriku Systems Environmental Lecture	PC recycling	10
June 29	Fr.	Hamagawa Elementary School, Shinagawa Ward, Tokyo	My earth	40
July 3	Tu.	Nakano Second Junior High School, Nakano Ward, Tokyo	My earth	94
July 6	Fr.	Ankouji Elementary School, Takatsuki City, Osaka	PC recycling	72
July 11	We.	Tsukuichuo Elementary School, Sagamihara City, Kanagawa Prefecture	PC recycling	23
July 21	Sa.	Junior High School Attached to Minami High School, City of Yokohama Kanagawa Prefecture	PC dismantling	31
July 23	Mo.	Tamon Elementary School, Setagaya Ward, Tokyo	PC recycling	14
July 24	Tu.	Higashi Fukasawa Elementary School, Setagaya Ward, Tokyo	Production of electricity	26
July 25	We.	Consumer Co-Operative Kobe Seikatsu Bunka Center	PC dismantling	32
		Todoroki Elementary School, Setagaya Ward, Tokyo	PC recycling	49
July 26	Th.	Summer Seminar, Takezono Nishi Elementary School, Tsukuba City, Ibaraki Prefecture	PC recycling	24
July 30	Mo.	FSL Mie Plant Employee Family Tour	PC dismantling	35
Aug. 1	We.		PC dismantling	30
July 30	Mo.	Inagi City Silver Jinzai Center	PC recycling	12
July 31	Tu.	General learning event for Kawasaki City elementary schools	PC recycling	43
Aug. 2	Th.	EPOC visiting environmental lecture	PC dismantling	39
		FSL Akiruno TC Family plant tour	PC dismantling	15
Aug. 4	Sa.	Summer Seminar, Tomigaokakita Junior High School, City of Nara	PC dismantling	25
Aug. 6	Mo.	"Bikkuri! Eco 100 Best 2012" Takashimaya Department Store, Kyoto Location	PC dismantling	12
Aug. 10	Fr.	"Bikkuri! Eco 100 Best 2012" Takashimaya Department Store, Shinjuku Location	PC dismantling	20
Aug. 11	Sa.	Recycle Kobo Rokko	PC dismantling	23

Date		Requesting Party	Content	Participants
Aug. 14	Tu.	Fujitsu Kawasaki Plant Employee family tour	PC dismantling	23
Aug. 23	Th.	Kansai University Hokuyo Junior High School	PC dismantling	2
Aug. 24	Fr.	Fujitsu Numazu Plant Summer Vacation Parent-Child Eco Classroom	PC dismantling	46
Aug. 28	Tu.	Children's Club Onojo City, Fukuoka Prefecture	PC recycling	16
Sep. 5	We.	Tokai University Urayasu Senior High School	PC dismantling	40
Sep. 11	Tu.	Ueki Junior High School, City of Nogata, Fukuoka Prefecture	PC dismantling	81
Sep. 15	Sa.	The Children's University of Kawagoe	PC dismantling	77
Sep. 26	We.	Oono Elementary School, Kumamachi Elementary School, Town of Ookuma, Fukushima Prefecture	PC recycling	42
Sep. 29	Sa.	Matsugaya Elementary School, City of Hachioji, Tokyo	PC recycling	40
		Festival 2012 at Fujitsu Nasu Plant	PC dismantling	35
Oct. 11	Th.	Masaki Elementary School, City of Hashima, Gifu Prefecture	PC recycling	175
Oct. 14	Su.	Nibu Elementary School, City of Higashi Kagawa, Kagawa Prefecture	My earth	30
Oct. 16	Tu.	Tado Junior High School, City of Kuwana, Mie Prefecture	PC recycling	51
Oct. 21	Su.	Aizuwakamatsu City Environmental Festival	Others	30
Oct. 23	Tu.	Sonobe High School, Kyoto Prefecture	PC dismantling	75
		Takada Elementary School, Town of Aizumisato, Fukushima Prefecture	PC recycling	73
Oct. 26	Fr.	Sunamachi Elementary School, Koto Ward, Tokyo	Production of electricity	80
Oct. 27	Sa.	Gosho Minami Elementary School, City of Kyoto, Kyoto Prefecture	PC recycling	47
Oct. 31	We.	Ota Sakuradai High School, Tokyo	PC dismantling	57
		Musashino Higashi Elementary School	PC recycling	71
Nov. 6	Tu.	Kodaira City Second Junior High School, Kodaira City, Tokyo	PC dismantling	25
Nov. 10	Sa.	Junior High School Attached to Oizumi High School, Tokyo	PC dismantling	120
Nov. 16	Fr.	Minamino Elementary School, Hachioji City, Tokyo	PC recycling	90
Nov. 20	Tu.	Tsutsujigaoka Elementary School, Inagawa Town, Hyogo Prefecture	PC recycling	131
Nov. 27	Tu.	Nishi Akiru Elementary School, Akiruno City, Tokyo	PC recycling	61
Nov. 29	Th.	Toyono Elementary School, Kasukabe City, Saitama Prefecture	PC recycling	90
Nov. 30	Fr.	Masugata Junior High School, Kawasaki City, Kanagawa Prefecture	Production of electricity	30

Date		Requesting Party	Content	Participants
Dec. 3	Mo.	Atsugi Elementary School, Atsugi City, Kanagawa Prefecture	PC recycling	152
Dec. 6	Th.	Kawakami Elementary School, City of Yokohama, Kanagawa Prefecture	PC recycling	66
		Shinjo Minami High School, Yamagata Prefecture	PC dismantling	22
Dec. 10	Mo.	Jissen Gakuen Junior High School	PC dismantling	59
Dec. 14	Fr.	Takakura Elementary School, Kasugai City, Aichi Prefecture	My earth	122
Dec. 17	Mo.	Toyotama Junior High School, Nerima Ward, Tokyo	PC dismantling	270
Dec. 18	Tu.			
Dec. 18	Tu.	Jonan Elementary School, Aizuwakamatsu City, Fukushima Prefecture	PC recycling	79
Dec. 20	Th.	Miyakami Elementary School, Hachioji City, Tokyo	PC recycling	36
Jan. 8	Tu.	Takasuna Elementary School, Fujisawa City, Kanagawa Prefecture	My earth	35
Jan. 10	Th.	Shincho Elementary School, Kawasaki City, Kanagawa Prefecture	Production of electricity	52
Jan. 16	We.	Kuwabe Elementary School, Kuwana City, Mie Prefecture	PC recycling	41
Jan. 17	Th.	Kume Elementary School, Kuwana City, Mie Prefecture	PC recycling	70
Jan. 19	Sa.	Arakawa Ward Third Junior High School, Arakawa Ward, Tokyo	My earth	18
Jan. 23	We.	Chouhouji Elementary School, Nagaokakyo City, Kyoto Prefecture	PC recycling	25
Jan. 24	Th.	Jujodai Elementary School, Kita Ward, Tokyo	PC recycling	18
Jan. 25	Fr.	Fujinoki Junior High School, City of Yokohama, Kanagawa Prefecture	PC dismantling	18
Jan. 29	Tu.	Yamato Junior High School, City of Yokohama, Kanagawa Prefecture	PC dismantling	52
Feb. 1	Fr.	Kawasaki International Eco-Tech Fair 2013	PC dismantling	49
Feb. 2	Sa.	Fujitsu Kanagawa Branch Tour	PC dismantling	27
Feb. 12	Tu.	Wakamatsu Elementary School, Sagami City, Kanagawa Prefecture	Production of electricity	78
Feb. 14	Th.	Tomioka High School, City of Susono, Shizuoka Prefecture	PC dismantling	129
Feb. 25	Mo.	Hakone Junior High School, Town of Hakone, Kanagawa Prefecture	PC dismantling	76
Feb. 27	We.	Kashiwai Elementary School, City of Ichikawa, Chiba Prefecture	PC recycling	105
Mar. 7	We.	Nagoya Keizai University Takakura High School	PC dismantling	11
Total				4,238

Case Study

Instructor for Toyama Environmental Challenge 10 (Environmental Education Class)

Toyama Fujitsu Limited provided an instructor for the Toyama Environmental Challenge 10 project. Toyama Prefecture and the Toyama Environmental Foundation have been carrying out since FY 2004 as part of their efforts to educate the prefecture's citizens on the topic of preventing global warming.

Toyama Environmental Challenge 10 is an initiative in which Toyama Prefecture's 10-year olds (4th graders) learn about the problem of global warming, decide on a goal, work with their families to achieve that goal, and then evaluate their results. In a school class, a Toyama Fujitsu employee explained to students the basics of global warming prevention and what individual households can do about it. In FY 2012, three lessons were held - on June 23 and 27, and October 31 - for two classes of approximately 35 students.

TOPICS

"Birdie for Green" Tree Planting Activity in Miyagi Prefecture

The Fujitsu Ladies women's pro golf tour sponsored by Fujitsu is working to revitalize forests and conserve biodiversity through the "Birdie for Green^{*1}" program.

Based on the 2011 "Birdie for Green" program, a tree planting activity was held at a prefectural forest in Taiwa, a town in Kurokawa-gun, Miyagi Prefecture in June 2012. Part of the motivation for this activity was to support efforts to recover from the Great East Japan Earthquake. Fujitsu Group employees in the Tohoku Region, however, wanted to go beyond contributing money; they wanted to take some kind of concrete action. Seventy-four employees and their families, therefore, worked up a sweat earnestly planting trees. For the participants, the activity became a concrete experience of the idea that steadily doing what one can does help to support recovery and conserve the global environment.



Tree planting activity participants

^{*1} Birdie for Green:

One of the environmental conservation initiatives of the Fujitsu Ladies pro golf tour, the Birdie for Green program contributes to forest revitalization and biodiversity conservation by converting golfers' scores into numbers of seedlings and donating funds to purchase them.

Fujitsu Environmental Action Plan (Stage VII) Objectives

Based on results achieved to date, the Fujitsu Group will strive to work with society and undertake activities as a good corporate citizen.

In working with society, we will provide financial, technical, human resource, and other support for initiatives that address biodiversity and other social and environmental challenges. In pursuing this objective, we will support the initiatives of a diverse array of actors, including NPOs / NGOs, educational institutions, local governments, and citizens' organizations. Support means, for example, technical support for biosurveys needed by a local government to formulate and implement a local biodiversity strategy; financial support, or monitoring system or other technological support, to help an NPO protect rare species or implement global warming projects; and human resource support for the social contribution programs of an international institution. Working to fulfill this objective, we will expand our support for the activities of a diverse array of stakeholders.

As for the objective of undertaking activities as a good corporate citizen, we will support the social activities our employees volunteer their time for with other elements of society. The focus will be social contribution activities employees implement themselves, which could include forest and woodland conservation activities; tropical rainforest revitalization activities; coastal, river, or area cleanup activities; the holding of classes or other types of educational support; sponsorship of charity events, or disaster relief. Achieving this objective will have the effect of expanding the contribution activities undertaken by employees.

These objectives were determined from the perspective of sustainability. Activities will be promoted globally to solve not only environmental issues but social problems defined broadly.

Environmental Management

We are continuously working to improve our ISO 14001^{*1}-based environmental management systems and to promote group-wide environmental management.

*1 ISO 14001:

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

Fujitsu Group's Environmental Management Systems

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

By constructing EMS along with a global supply chain, the Fujitsu Group has further strengthened its global governance. This also allows the Group to promote even more efficient and highly effective environmental activities; not only grasping our achievement status for the Fujitsu Group Environmental Action Plan but also collecting a wide variety of information from all Group companies, such as legal compliance, emergency response, environmental communication and preservation activities, and conducting management reviews.

EMS Implementation and Operational Status

As of the end of FY 2012, Fujitsu has acquired global integrated ISO 14001 certification for a total of 82 companies, including 12 overseas Group companies. In addition, our 25 overseas companies which are not production base sites are constructing and operating an EMS in line with Fujitsu Group environmental policies. In this way, we have established an environmental management structure across the whole Group.

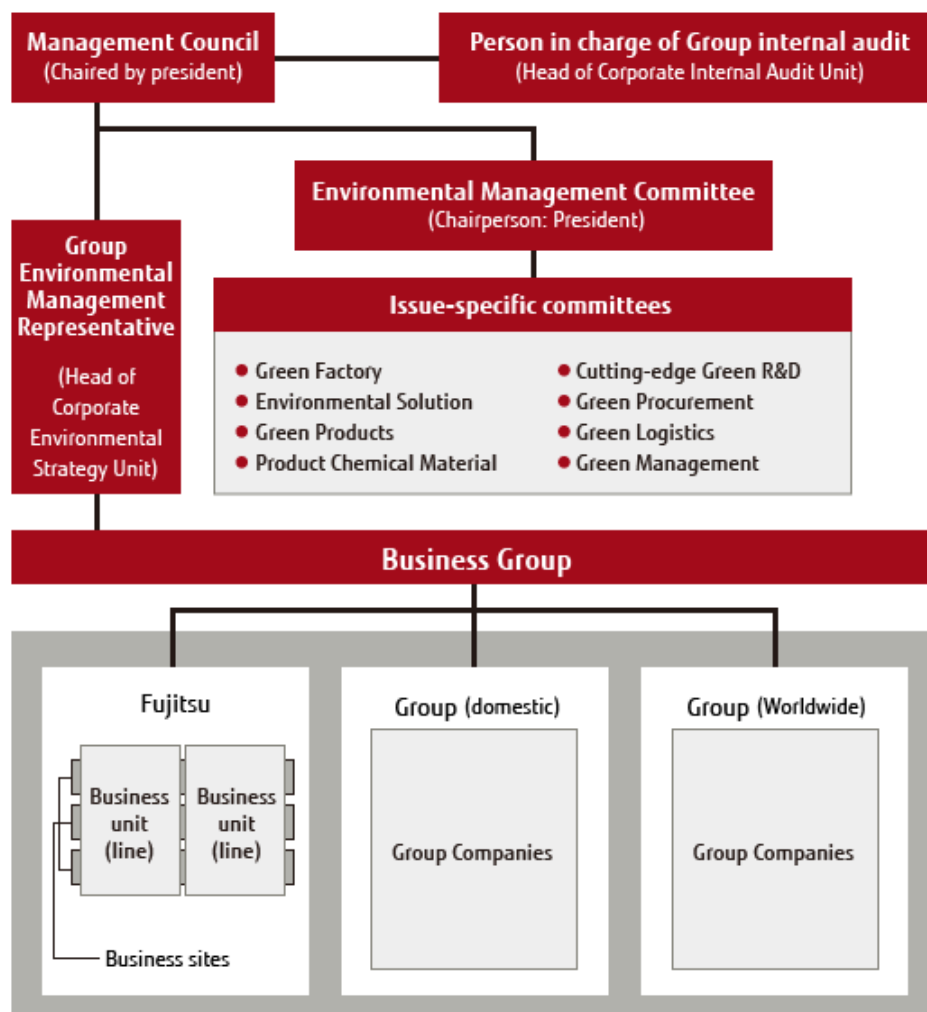
Environmental Promotion Structure

The final decisions on environmental management are taken at meetings of the Management Council, chaired by the president. The Environmental Management Committee, which also is chaired by the president, discusses all manner of issues related to environmental management. Its purpose is to strengthen the Fujitsu Group's environment-related governance, raise the level of the Group's environmental management, and consider medium-to-long term issues.

Under the Environmental Management Committee, we form issue-specific committees depending on the importance of the environmental issues at hand. These committees make it possible to deal with issues in a manner that enables both the swift uptake of action approaches throughout the Group, and achievement of efficiency and speed improvements.

The Environmental Management Committee's deliberations are also shared with the whole group and we have created a Global Environment Management Working Group (WG) under the Green Management Committee as an organization to strengthen our EMS activities through promoting an understanding of the results of the committee to encourage proactive actions. In the Global Environment Management WG, we assemble people from across the various business groups and inform them of items that we request be handled by the various divisions and group companies to unify our global information sharing.

Environmental Management Framework (as of March 2013)

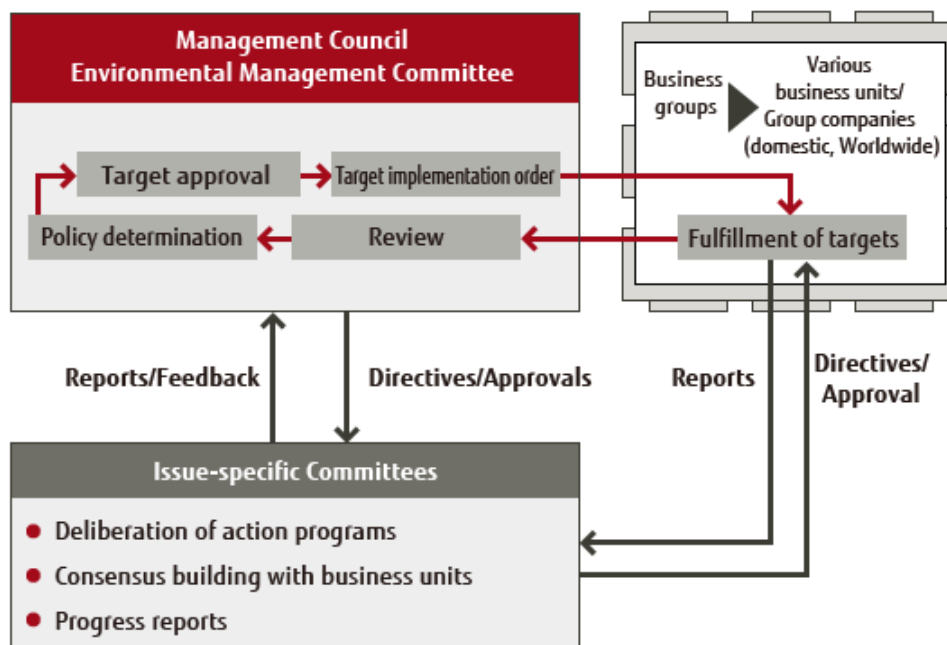


Activity Flow

The Environmental Management Committee proposes, deliberates, and decides upon environmental matters relating to all Group companies. It determines the directions to be taken for energy usage volume, CO2 emissions reductions, ways to address environmental risk, and other medium-to-long term matters important to environmental management at an overall level. The Environmental Management Committee also conducts environmental management reviews and has approval authority for the Fujitsu Group Environmental Action Plan.

The issue-specific committees are subcommittees set up by the Environmental Management Committee to make a dedicated response to specific issues. Their main role is to discuss targets for the Environmental Action Plan check on the progress being made for each target and promote further activity toward achieving them. Issue-specific committees' progress reports are approved and directed by the Environmental Management Committee.

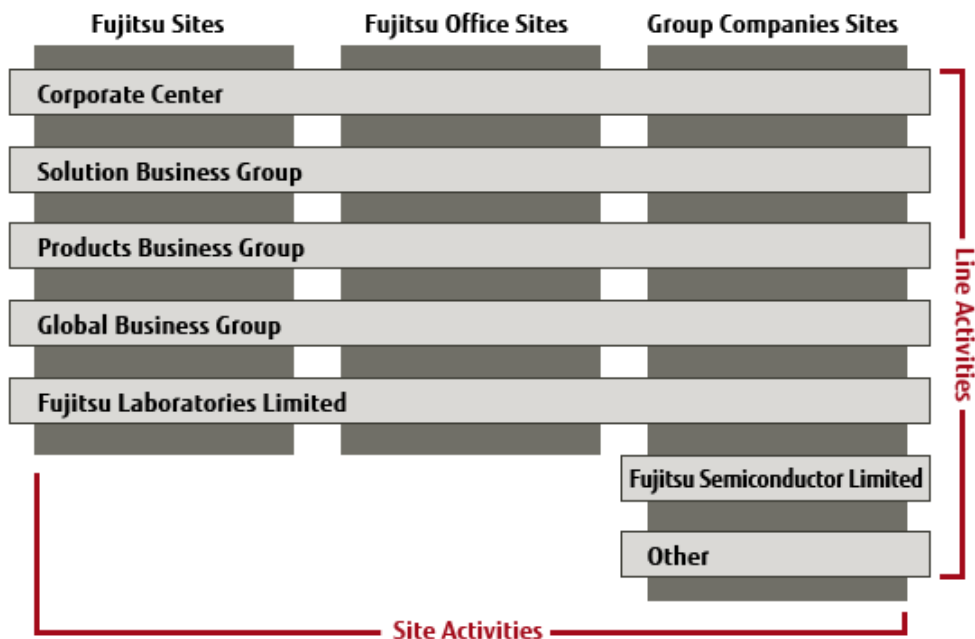
Activity Flow



Management Based on the Line/Site Matrix Structure

The Fujitsu Group carries out its environmental management along the same lines as its corporate management. To this end, we are pursuing environmental management within a matrix structure combining (1) "line activities" directly tied to the business operations of various divisions and companies (including eco-friendly product development and the expansion of environmental contribution solutions) and (2) "site activities" to tackle common themes affecting each factory or business location (such as energy conservation and waste reduction).

In this way, along with minimizing the environmental burden of our own business activities, we promote reductions in environmental burdens more generally through the sale of our products and services.



- [Environmental Management : Case Study Archives](#)

Continuous Improvements to Environmental Management Systems

Efforts to Improve Environmental Performance

To improve our environmental management performance, we are implementing performance evaluations (ISO14031-compliant). Performance evaluations provide comprehensive feedback on matters such as progress in achieving targets, compliance with laws and regulations, and operating and management conditions. In FY 2012, we completed evaluations of all 23 of the Fujitsu Group's principal production sites.

Implementing Environmental Audits

Internal Audit Implementation and Results

Internal audits are directed by the Corporate Internal Audit Unit, which is unaffiliated with any line organization, to ensure that our internal audits are fully objective and independent. The Corporate Internal Audit Unit allocates internal auditors who belong to Fujitsu or Fujitsu Group companies.

In FY 2012, we carried out internal audits for factories, offices, and other facilities at 405 locations in Japan and 16 overseas from June 2012 to January 2013. For this audit, we scrutinized the trends and results with the FY 2011 internal audit and the external audit and found four major points to be focused on: (1) adherence to compliance, (2) achievement of environmental objectives and targets, (3) complete and thorough operational control and (4) confirmation of the status of activities being carried out by the organization that has created and operates the EMS tailored to the purpose of fulfilling all requirements of the ISO14001 standard. Also, we continuously implement mutual audits between different sites, a program we have been working on since FY 2009 to share experience among different divisions and, thereby, invigorate environmental activities.

As a result of these internal audits, we discovered 277 findings, of which none were classified as major, 26 as minor, and 251 were observations.

The number of findings decreased by 70 from the previous year. And the fact that the number of findings per audit is declining year-by-year suggests that our environmental management system has taken hold. In terms of content, 45% involved adherence to compliance, operational control, environmental objectives, targets and programs. The matters concerning compliance with various laws involved deficiencies in notifications and outsourcing agreements concerning industrial waste, and omissions from industrial waste manifests. Matters related to operational control involved deficiencies in control of waste and chemical substances. Matters related to environmental objectives and targets involved deficiencies in programs and progress management charts.

To enhance environmental activities in overseas locations, we conducted internal audits at 13 sites, including all production sites, in FY 2012. Among the indicated matters, 50% were related to "Emergency preparedness and response", "Control of documents", and "Objectives, targets and programs". At a more specific level, "Emergency preparedness and response" refers to the lack of procedures for determining what aspects of an emergency situation are clearly environmental and a lack of records of training. "Control of documents" refers to the lack of clear indications of the degrees to which prior fiscal year objectives and targets were achieved. There were also findings of an unclear separation between objectives/targets and operational control. Enhancement of local internal audit functions, however, reduced by 62.5% the number of non-conformities detected by external audits, a marked improvement from prior results.

To further enhance environmental management at overseas business sites, we conducted internal auditor training for employees responsible for advancing environmental matters. This training was held at 13 sites, for approximately 180 participants.



Internal audit being performed at an overseas site



Training for internal auditors

External Audit and Results

In FY 2012 an external audit was carried out from September 2012 through January 2013. In Japan, we were audited by the Japan Audit and Certification Organization for Environment and Quality (JACO). JACO identified no matters for the Fujitsu Group as a whole. In addition, JACO made 67 observations for individual Group companies. Outside Japan, we were audited by DNV BUSINESS ASSURANCE JAPAN K.K. DNV also identified no matters for the Fujitsu Group as a whole, but they identified 1 major non-conformity and 5 minor non-conformities, and made 25 observations. We have completed remedying these matters as of the end of FY 2012. Audit findings were shared throughout the Group, and we are confirming the status of these matters in the FY 2013 internal audit.

An ISO 14001 regular post-certification surveillance audit was conducted in FY 2012 and approval for maintenance of our certification was granted in February 2013.

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 2012, there were 6 events in which laws were violated. Most of these were (1) violations related to industrial waste processing manifests or outsourcing contracts, or (2) deficiencies in notification documents.

Legal violations were greatly reduced through the horizontal sharing of information on FY 2011 findings and through training targeting personnel responsible for industrial waste. But there we still had violations, so we will move forward with thorough self-checks. With regard to industrial waste, in particular, we are developing a new approach and will select outstanding waste processors to eliminate administrative violations related to waste from offices.

ICT-based EMS

To improve the efficiency and visibility of environmental management, the Fujitsu Group makes aggressive use of unique environmental management tools that take full advantage of ICT.

EMS Applying ICT

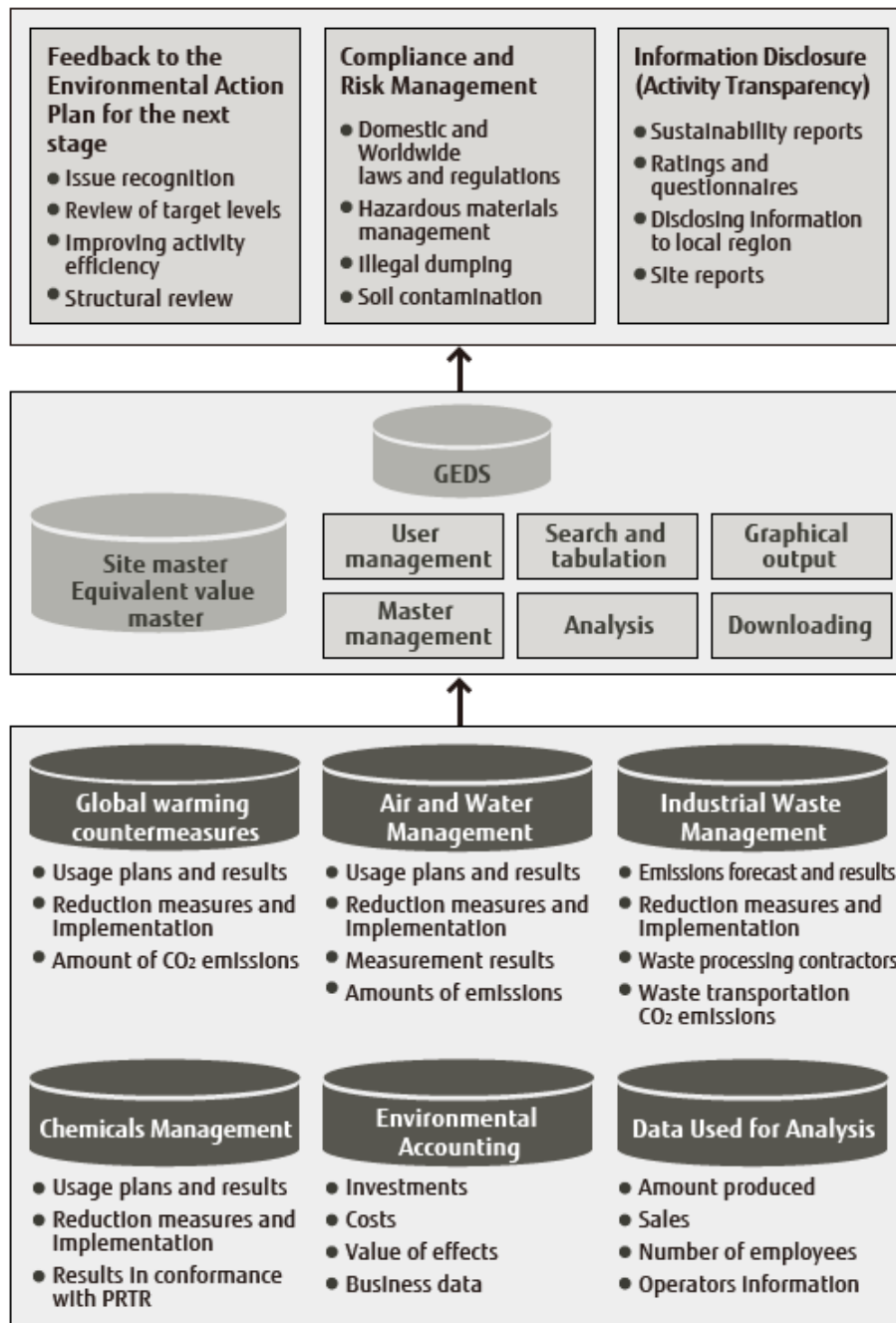
The Fujitsu Group uses proprietary environmental management tools that make the most of ICT. For example, we use the Global Environment Database System (GEDS), which can centrally manage data on plans, results, implementation status, and other matters for Fujitsu Group business sites throughout the world, and the ISO 14001 Green Management System (GMS), which supports EMS operation by centrally managing data on compliance and risk management conditions, to make environmental management efforts more efficient and visible.

In addition, the communications platforms of all Fujitsu Group companies are used for EMS operations. Video conference systems, for example, are used for regional seminars and other forms of smart communication for EMS operation.

Use of the Global Environment Database System

The Fujitsu Group uses the Global Environment Database System (GEDS) to collect the environmental burden (performance) information for Fujitsu Group companies and business sites and to manage plans, results, and policy information uniformly.

Global Environment Database System

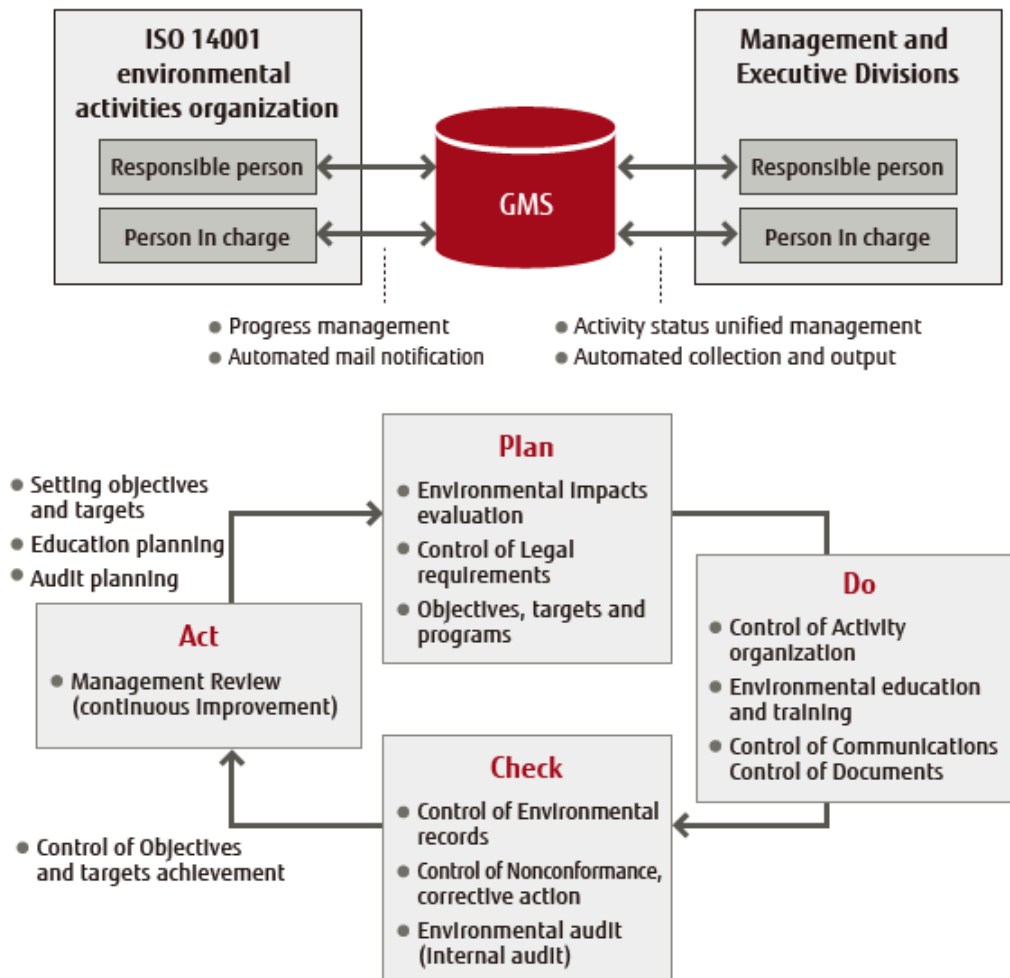


Use of the ISO 14001 Green Management System

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; 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



In-House Educational and Enlightenment Activities

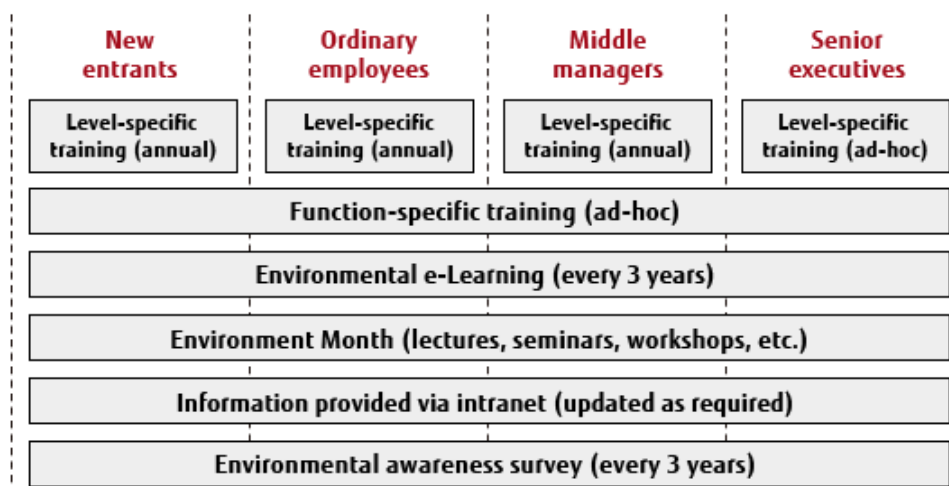
The Fujitsu Group believes heightened awareness, and the initiatives of individual employees are critical to the pursuit of environmental management and, therefore, we implement various forms of environmental education and enlightenment.

Our Environmental Education System

To ensure that our environmental management takes firm root through the participation of all employees, the Fujitsu Group believes it essential to inculcate and raise the environmental awareness of each and every employee to a point where it links to actual practice. Based on this belief, the Group has been carrying out comprehensive environmental education and enlightenment training since 1995, based on the system described below.

In addition to having all of our employees undertake environmental e-learning once every three years to acquire a basic understanding of environmental management, we conduct environmental education for new entrants, ordinary employees, middle managers and senior executives, according to their job responsibilities. On top of this, customized environmental training is also delivered to individual areas of the business such as sales, systems engineering (SE), software development, procurement, logistics, manufacturing, hardware design and development, and R&D. We are 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



Environmental e-Learning for All Group Employees

To help ensure that individual employees understand the Fujitsu Group's thinking on environmental management and encourage them to engage in environmentally conscious initiatives in their work, and to facilitate our practice of environmental management in conformity with the ISO14001 international standard and promote general knowledge, understanding, and practice of the Fujitsu Group Environmental Action Plan, we conduct environmental e-Learning for all Group employees. A new version of environmental e-Learning is planned for implementation given that FY 2013 is the first year of the Fujitsu Group Environmental Action Plan(Stage VII).



Environmental e-Learning program screenshot

Environmental Education by Division

Recycling Center Tours for Sales and Design Divisions

Environmental business seminars were held on May 23 and May 28, 2013 for sales divisions. The purpose of these seminars was to have participants observe with their own eyes Fujitsu's recycling initiatives and experience firsthand the dismantling of products and separation of materials, to improve their business skills by having them share in an understanding of environmentally conscious manufacturing. We have conducted these seminars every year since 2009 at Fujitsu recycling centers located throughout Japan and have so far hosted over 400 participants.

Workshops for Sales Divisions

On June 26 and July 9, 2012, we conducted workshops on the theme of contributing to the green development of customers. These workshops were held for sales divisions and were attended by 43 participants.

After considering the topic of "starting points for customers and starting points for the global environment," participants broke into groups, and discussed and made presentations on the topics of "what is necessary to advance toward a sustainable future together with customers" and "effective initiatives that Fujitsu could take and methods for approaching customers."

Environmental Proposal Training for Sales and SE Divisions

We have held approximately 50 training sessions, attended by over 1,000 participants, at sales offices throughout Japan to enhance the attractiveness of proposals to customers by adding an environmental element. In this training, we showed participants how to use the EcoCALC Web tool for calculating environmental contributions, and demonstrating the impacts of ICT solutions, in terms of CO2 emissions reductions, energy savings, and cost savings. We also showed participants how to incorporate the environmental-burden-lowering effects of ICT and environmental labels in proposals, and provided examples of outstanding environmental proposals.

Promoting Awareness Through Environment Month

The Fujitsu Group holds a number of events to raise environmental awareness among our employees in conjunction with Environment Month (June), which is sponsored by Japan's Ministry of the Environment.

Case Study

Initiatives at the Kawasaki Plant

Since 2009, the Kawasaki Plant has been collaborating with Kawasaki City, Kawasaki-shi park green tract of land association, and Kawasaki Frontale, on Carbon Challenge (CC) Todoroki, an initiative the four parties created to reduce CO2 emissions.

One of the activities sponsored by CC Todoroki was the Eco Kurashiko Fair held at Todoroki Ryokuchi Park on June 23, 2012. The purpose of the event was environmental education on a low-carbon society, resource circulation, and coexistence with nature, and the Kawasaki Plant participated with a booth where children could rescue dragonfly larvae left in a pool.



Eco Kurashiko Fair



Dragonfly larvae rescue event for children

Development of Environmental Learning Materials

In order to share with the outside world the environmental education expertise it has developed for its employees, Fujitsu has teamed up with Fujitsu FOM Limited to create a set of learning materials for environmental education entitled "Global Environmental Issue Keywords," and has been marketing them since May 2008 in the form of books and e-learning materials.

The program incorporates a broad spectrum of issues, including basic knowledge of global environmental issues, the environmental business of other companies, and ICT's contribution to the environment, all from the viewpoint of providing a broad understanding not only to those involved in environment-related businesses, but to all employees in the Fujitsu Group.



Global Environmental Issue Keywords book and e-Learning screenshot display

In-House Award Scheme

Fujitsu presents awards recognizing outstanding environmental contribution efforts within the Group to raise awareness and promote activities that benefit the environment.

Environmental Contribution Award and Environment Contest

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 were put forth for the FY 2012 Environmental Contribution Awards. Among them were efforts in areas like making environmental contributions to customers through the provision of products and services, reducing internal environmental burden, and social contribution activities. In the end, however, the FY 2012 Environmental Contribution Awards went to entries including an energy management system for mobile base stations; a robot class titled, "Future Dreams," to be held for families as a disaster recovery project; and approaches for reducing electricity consumption. For the Environmental Photo Contest, many 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. The contest's 1st Prize was presented to the photo appearing to the right, but prizes also went to 22 other entrants, as well.



Winner of the Environmental Photo Contest 1st Prize "Turtle from the highway"

Special Environmental Award

Since FY 2008, the Fujitsu Group has offered a Special Environment Award program, intended to encourage Group sales and system engineers to promote the use of ICT solutions in helping customers reduce their environmental load.

New evaluation items were added in FY 2011 and FY 2012. The former included introducing ICT to make the effects of CO2 reduction visible, enhancing the solutions business through pursuit of such opportunities, and pursuit of business discussions aimed at achieving customer cost reductions through energy conservation (reductions in electricity consumption). Added in FY 2012 was the pursuit of resource savings through the use of ICT. Organizations notable for their activities in these areas were recognized by Fujitsu's president at the Company's April 2013 Solutions Business Expansion Conference.



Award ceremony



Commemorative photo of award winners and Fujitsu's president

Environmental Communication

The Fujitsu Group is committed to two-way communication with all stakeholders and pursues a variety of different opportunities to this end.

Information Disclosure via Sustainability Reports and the Fujitsu Website

In 1996, the Fujitsu Group began publishing an Environmental Report, focusing on the records and results of environmental protection activities carried out by the Group. The report reflects Fujitsu's commitment to making such information publicly available, thereby increasing the transparency of the Group's activities. In 2003, social aspects were combined with the Environmental Report for the publication since then of the Fujitsu Group Sustainability Report. The Environment page of the Fujitsu website, meanwhile, contains the contents of the Sustainability Report, as well as specific details of individual initiatives, and is frequently updated with the latest information.

- [Fujitsu Group Sustainability Report](#)

Site Report Publication

Fujitsu production plants, business sites and Group companies publish environmental reports, so that local residents and customers can better understand our environmental initiatives.

Events & Seminars

Main Conventions in which Fujitsu Participated in FY 2012

Convention	Location	Date
Japan		
Kawasaki International Eco-Tech Fair 2013	Kawasaki	February 2013
Eco Products 2012	Tokyo	December 2012
Carbon Offset Matching in Kochi	Kochi	November 2012
Ishikawa "Yume" Mirai Haku (Ishikawa "Yume" Future Exposition) 2012	Kanazawa	November 2012
CEATEC	Chiba	October 2012
Eco-Life Yamagata 2012	Yamagata	October 2012
Fujitsu Ladies 2012	Chiba	October 2012
Overseas		
ASEAN Fujitsu Day 2012	Kuala Lumpur, Malaysia	October 2012
ITU Green Standards Week	Paris, France	September 2012
Rio+20 Japan Pavilion	Rio de Janeiro, Brazil	June 2012



ITU Green Standards Week (Paris)



Eco-Products 2012 (Tokyo)

Environmental Efforts at Events and Seminars

At exhibition events such as the Fujitsu Forum, at the annual meeting of shareholders, and at other seminars and events, Fujitsu uses green electricity to reduce our CO2 emissions. Our environmental efforts at such venues take various forms including reducing the amount of paper used and utilizing eco-friendly materials.

In FY 2012, Fujitsu purchased a Green Power Certificate for a total of approximately 39,000kWh of electricity.

Environmental Efforts in Catalog Printing

When printing catalogs, Fujitsu utilizes environmentally friendly materials, including certified eco-friendly paper and ink, and ecologically sound printing methods. These efforts help reduce CO2 emissions as well as harmful liquid waste and other printing byproducts.

Communicating with Stakeholders

The Fujitsu Group works to establish proactive communications, as a way of working better together with its stakeholders.

Environmental Dialogues with Stakeholders

Fujitsu conducts environmental dialogues with a broad range of stakeholders as a way to promote better environmental management, build trust, and engage in creative activity together with society.

FY 2012 Dialogues

In FY 2012, we held a total of seven dialogues to which we invited a total of 15 experts. The first two dialogues of FY 2012 continued the theme of the March 2012 dialogue. In these two sessions, participants discussed Fujitsu's environmental management accomplishments and results, and communication with society. Beginning with the third dialogue, we sought to address particular themes based on discussions in previous dialogues and to further deepen mutual understanding.

1st Dialogue : held on April 17, 2012

[Participants]

- Miyako Maekita
Representative of Sustena
- Yasunari Matsuno
Associate Professor, Department of Materials Engineering, Graduate school of Engineering, The University of Tokyo
- Kana Yamashita
Deputy Director, Director, Climate Security Program, Conservation International Japan
- Junko Edahiro (Facilitator)
President, Institute for Studies in Happiness, Economy, and Society

2nd Dialogue: held on June 28, 2012

[Participants]

- Toshihiko Goto
Chair, Environmental Accounting Research Group
- Seita Emori
Chief, Climate Risk Assessment Section, Center for Global Environmental Research, National Institute for Environmental Studies
- Rie Asaba
Chairman of the Board of Directors, NPO Kawaguchi Citizens Environmental Council
- Junko Edahiro (Facilitator)
President, Institute for Studies in Happiness, Economy, and Society

[1st and 2nd Dialogues]

The participants expressed the views that Fujitsu is playing a leading role in pursuing biodiversity conservation activities that include suppliers, and that our environmental activities are at the forefront of such initiatives. They also pointed out, however, that the results of our activities have yet to be fully publicly recognized. This reminded us that strengthening communication with society is an issue we must address. Turning to initiatives pursued through main business activities, the participants expressed the view that, from the perspective of social contributions, corporate environmental activities can be quite transient, and that Fujitsu's major strength is that it can contribute to the environment through its main business of providing solutions.

- [Dialogue in FY 2011](#)

3rd Dialogue: held on December 18, 2012

Theme: Measures for Preventing Global Warming, Forest Conservation Activities

[Participants]

- Atsuko Suzuki
Representative Director, Environmental Business Agency
- Yasunari Matsuno
Associate Professor, Department of Materials Engineering, Graduate School of Engineering, The University of Tokyo
- Kana Yamashita
Deputy Director, Director, Climate Security Program, Conservation International Japan
- Junko Edahiro (Facilitator)
President, Institute for Studies in Happiness, Economy, and Society

[Opinions]

- Issues related to how to cut CO2 and save electricity in the daily lives of individuals is exactly where ICT should come into play. (Suzuki)
- For forest conservation, the extent to which a large number of people can be involved is key. Activities should be established, so that projects can continue even without corporate involvement. (Suzuki)
- Fujitsu has lots of good ICT solutions, for example the use of smart grids to promote the saving of electricity. Instead of attacking global warming directly, what about approaching it indirectly from the perspectives of saving energy and electricity? (Matsuno)
- Fujitsu shouldn't be protecting forests itself; it should be doing things like creating databases and supporting conservation activities indirectly. In other words, unless it uses its main business activity of ICT to engage in business, benefits to conservation won't continue. (Matsuno)
- The decline of forests accounts for 1/5 of annual greenhouse gas emissions, and has a great impact on the protection of biodiversity and water resources. By all means, I would like Fujitsu, as a global ICT business, to consider what it can contribute going forward. (Yamashita)
- Climate change must be dealt with as a common issue for humanity. I believe that ICT solutions are critical as a sector in which companies can powerfully show government what is possible. (Yamashita)

4th Dialogue: held on February 15, 2013

Theme: Energy

[Participants]

- Seita Emori
Chief, Climate Risk Assessment Section, Center for Global Environmental Research, National Institute for Environmental Studies
- Yosuke Ikehara
Climate & Energy Project Leader, Conservation Division, WWF Japan
- Junko Edahiro (Facilitator)
President, Institute for Studies in Happiness, Economy, and Society

[Opinions]

- On the 2°C objective for global warming measures, there needs to be more discussion in society of things that should be avoided because of their impacts. Actually, we also need more opportunities for discussion. (Emori)
- If we look back on the past when thinking about the things that brought about change for the global environment, we can see that the industrial structure changed because the industrial revolution was "innovation." Changing society with ideas is difficult, but society can change with innovation Fujitsu brings about through technology. (Emori)
- It is technologically and economically feasible to meet all of the world's energy demand with renewable energy by the year 2050. The WWF's scenarios show that is possible. (Ikehara)
- I want Fujitsu to have a vision of itself in the year 2050 and beyond - what it wants to become - and to paint a picture of how it will use ICT in society. (Ikehara)

5th Dialogue: held on March 5, 2013
Theme: Environmental communication

[Participants]

- Miyako Maekita
Representative of Sustena
- Rie Asaba
Chairman of the Board of Directors, NPO Kawaguchi Citizens Environmental Council
- Takeshi Mizuguchi
Professor, Faculty of Economics, Takasaki City University of Economics
- Junko Edahiro (Facilitator)
President, Institute for Studies in Happiness, Economy, and Society

[Opinions]

- About letting people know about the environmental contributions of ICT, my impression is that there are many aspects that are not visible, so people won't get it if you don't change the way they are expressed. What Fujitsu is doing is wonderful, but may be it should consider that it is pursuing a kind of rigor that is beyond ordinary people, so it doesn't get communicated. (Maekita)
- It doesn't come through in press releases, but I think the message would be communicated if you talk about how difficult conditions are for people on the ground. (Maekita)
- Maybe it would be good if Fujitsu approaches this from the perspective of how ICT would make daily life more convenient; how communities could change for the better; things in which ordinary people would be interested. (Asaba)
- Showing concrete examples from residents' daily lives - examples in which people's voices can be heard and their faces can be seen - would communicate Fujitsu's activities. What I mean is the background of a product's development, little known facts, and other kinds of communications, by employees, that have a story to them. (Asaba)
- We were talking about how to communicate what exists now, but isn't the question of how social issues have been solved more important? (Mizuguchi)

6th Dialogue: held on March 8, 2013

Theme: Smart cities, resources

[Participants]

- Tsuyoshi Fujita
National Institute for Environmental Studies, Director of Eco-City System Research Program, Alliance Professor, Nagoya University. Visiting Professor, United Nation University. National Eco-Future City Promotion Board Member, National Minister Cabinet Administration Office
- Shinsuke Murakami
Associate Professor, Department of Systems Innovation, Graduate School of Engineering, The University of Tokyo
- Masatsugu Taniguchi
Journalist, Strategy Design Institute Resources and Environment
- Junko Eda (Facilitator)
President, Institute for Studies in Happiness, Economy, and Society

[Opinions]

- If recommendations cover not just private-sector technology but instead smart cities on which the private and public sector will collaborate, and a scheme for a smart resource cycle, that will make for a growth strategy. (Fujita)
- It is also important to have an approach in which companies put forth bold visions of the future, draw a roadmap to get there, and include the need for their technology. Companies describing visions of the future, and communicating and promoting them to the government and society, will lead to new strengths and competitiveness for Japan. (Fujita)
- People say that the lack of success is due to low awareness of the recycling system, but there are lots of people who don't use the recycling systems for products like cell phones, even though they know about them, so wouldn't it be good to think about other ways to publicize these systems. If they know why products are being collected, people may change their behavior. (Murakami)
- In Japan, huge amounts of money are required for processing wastewater from mines even after the mines had been closed. The mining of resources entails a large environmental burden, but it is necessary. There needs to be a broad discussion of sustainable resource usage, including everything from mining to recycling and waste processing, but it isn't really taking place. (Murakami)
- Sustainability must be interpreted to mean not sacrificing the needs of future generations to satisfy the needs of the current generation. Recycling leads to the saving of resources for future generations and is a high-value activity for companies. (Taniguchi)
- For example, something like a tax system that will change society by attaching a monetary cost to the use of precious resources is needed. (Taniguchi)

7th Dialogue: held on March 22, 2013

Theme: Vision of the Future

[Participants]

- Shinichi Takemura
Anthropologist, environmental thinker; Professor, Kyoto University of Art & Design; Founder of the Earth Literacy Program
- Nao Suzuki
Publisher of greenz.jp; Director, NPO Greenz
- Yoshihiro Fujii
Professor, Sophia University Graduate School of Global Environmental Studies

[Opinions]

- I want Fujitsu to develop for the world ICT solutions that promote human development - that release the hidden potential of humans - not things that become a human substitute. (Takemura)
- A CSV(Creating Shared Value) vision like one that creates opportunities that use ICT to increase human value means new opportunities for Japanese companies. (Takemura)
- We are entering an era in which individuals work to change their surroundings to create the society they want, and this could be called a society in which the potential of individuals is unlocked. It would seem there are possibilities for putting forth services and ICT that bring people together.(Suzuki)
- There are cases in which ICT becomes the objective, but ICT is not the goal; it must be used to solve social issues. (Suzuki)
- It is not just finances and assets that are being used to evaluate companies; environmental and social factors are taking on greater and greater importance, and it is becoming difficult for investors to assess the value of a company simply by looking at its balance sheet. (Fujii)
- Fujitsu already has a wealth of resources and technologies, so I'm interested in how they will use them to respond to society's expectations and relate to society going forward. It needs to take some degree of risk and move forward with social contributions and business activities. (Fujii)



5th Dialogue



6th Dialogue

We will use the opinions expressed in dialogues to enhance and strengthen the Fujitsu Group's environmental management. We will continue with our efforts to help realize a sustainable society and will continue to value communication with all members of society.

Cooperation with External Organizations

The Fujitsu Group works to reinforce environmental management through cooperation with external organizations.

Collaborating with External Groups to Promote Green ICT

The Fujitsu Group is committed to reducing environmental impact on a global scale by promoting widespread use of Green ICT through proactive initiatives with external organizations, including international standardization bodies.

For example, methods for measuring positive environmental impact produced by Fujitsu Group solutions had not been standardized internationally. So Fujitsu took part in the ICT and Climate Change Group (SG5 WP3) of the International Telecommunication Union Telecommunication Standardization Sector (ITU-T), an international standardization body in the electrical and electronics sector. The group's findings were announced in March 2012 as the "Methodology for the Assessment of the Environmental Impact of Information and Communication Technology Goods, Networks and Services (L.1410)."^{*1} At the national and regional level as well, we serve as chair of the Green IT Promotion Council's (now known as the JEITA Green IT Committee) Committee of Survey and Analysis in Japan, leading the establishment of more practical methods for assessing environmental impact, and contributed to the establishment of a method for evaluating the contributions of products and services under the Action Plan of the Industries of Electrical and Electronics on a Low Carbon Society, implementation of which begins in FY 2013. We have also participated in the Global Taskforce on Harmonizing Global Metrics for Data Center Energy Efficiency and in the ISO/IEC JTC1 SC39 (Sustainability for and by Information Technology) standardization committee, and acted as an industry representative leading the development and promotion of measurement and calculation methods for power usage effectiveness (PUE), a datacenter energy efficiency index, at the JDCC (Japan Data Center Council). These initiatives have made it possible for CO2 reductions produced by ICT to be assessed under an international framework, which is expected to promote further utilization of the technologies.

Fujitsu has also made significant contributions to the development of other international environmental evaluation methodologies and indices. One is the ICT Sector Guidance to the GHG Protocol Product Life Cycle Accounting and Reporting Standard, for which Fujitsu serves as a Steering Committee member. Fujitsu is also heavily involved with The Green Grid - a non-profit organization that works to improve the resource efficiency of ICT devices and define environmental metrics, such as PUE^{*2} for datacenters throughout the world. Fujitsu became this organization's first Contributor Member^{*3} from Japan in 2008 and, in FY 2012, served as the EMEA Technical Work Group Vice-Chair.

Further, the Fujitsu Group joins in activities to evaluate the sustainability of our products using internationally recognized methods. For example, the IEC TC 111 committee creates environmental standards for electrical and electronics products, and we are actively involved in the Japanese committee of its Working Group 4, which drafts international standards for calculating greenhouse gas emissions. In addition, for the IEC TC 100 committee, which is responsible for international standards for audio, video and multimedia systems and equipment, Fujitsu serves as technical secretary for TA 13, which is in charge of environmental regulations, and chair of the Japanese committee.

*1:

[Ministry of Internal Affairs and Communications of Japan press release \(in Japanese\)](#)

*2 PUE (Power Usage Effectiveness) :

PUE (Power Usage Effectiveness) is an index of datacenter energy efficiency. PUE is calculated as total datacenter electricity consumption, divided by electricity consumed by ICT devices inside the datacenter.




*3 Contributor Member:

A Contributor Member participates on the Technical Committee, reviews technical documents at each stage of development, and helps to determine the organization's future direction.

External Organizations




Green ICT

Promoting and disseminating Green ICT and standardization activities

- [JEITA Green IT Committee \[In Japanese\]](#) 
- [The Green Grid](#) 
- [Japan Data Center Council](#) 
- ISO/IEC JTC1 SC39 (Sustainability for and by Information Technology) Japan committee and task force
- ISO TC286 SC1(Smart Urban Infrastructure Metrics) Japan committee and Steering Committee

Climate Change

Working on initiatives to achieve a sustainable low carbon society

- [Japan Climate Leaders' Partnership \(Japan-CLP\)](#) 
- [ITU and Climate Change, the climate change group of the International Telecommunication Union Telecommunication Standardization Sector \(ITU-T\)](#) 
- International Electrotechnical Commission (IEC)
- [Greenhouse Gas Protocol \(GHG Protocol\)](#) 

Biodiversity

Promoting the conservation of biodiversity by corporations

- Business and Biodiversity Initiative
- Japan Business Initiative for Conservation and Sustainable Use of Biodiversity (JBIB)

Product Chemicals and Eco Design

Investigating frameworks to effectively communicate information on chemical substances contained

- The Japan Article Management Promotion Committee (JAMP)
- The Japan Green Procurement Survey Standardization Initiative (JGPSSI)
- Japan Environmental Management Association for Industry (JEMAI)

Environmental and Social Contribution

Promote environmental and social contribution activities

- WWF (World Wide Fund for Nature) Japan
- Nature Conservation Society of Japan (NACS-J)
- Wild Bird Society of Japan
- Japan International Forestry Promotion and Cooperation Center (JIFPRO)

Environmental Communication

Promote environmental communication

- Nippon Environment Club
- Japan for Sustainability (JFS)

Environmental Activities

- Communications and Information Network Association of Japan
- Japan Electronics and Information Technology Industries Association (JEITA)
- KEIDANREN (Japan Business Federation)

List of External Awards and External Evaluations

The Fujitsu Group's various initiatives for developing a sustainable society have been highly praised by external observers.

(As of March 2013)

Major External Awards and Evaluations Received by the Fujitsu Group

Recognition	Date	Sponsor(s)	Initiative
Low CO2 Kawasaki Pilot Brand '12	February 2013	Kawasaki City, Kanagawa Prefecture	Entry-level disk array ETERNUS DX60 S2, DX80 S2, DX90 S2
Award for outstanding energy management at the 2012 Ishikawa Energy-Saving Promotion Convention	February 2013	Ishikawa Prefecture Electricity Usage Rationalization Committee	Electricity conservation activities at PFU TechnoWise Limited
Ranked 4th in the 16th Nikkei Environmental Management Survey	January 2013	Nikkei Inc.	Environmental management initiatives
Environmental Award at the Business and Industry Awards	January 2013	Richardson Chamber of Commerce	Sustainability initiatives at Fujitsu Network Communications
Chairperson's Award, Eco-Products Awards Steering Committee in the Eco-Services Category at the 9th Eco-Products Awards	November 2012	Eco-Products Awards Steering Committee	Fujitsu Global Cloud Platform FGCP/S5
Green-IT Awards 2012 Commerce and Information Policy Bureau Director-General Award in the category of "Savings in Society's Energy Consumption by IT"	October 2012	Green IT Promotion Council	Fujitsu Global Cloud Platform FGCP/S5
Named to the Carbon Performance Leadership Index (CPLI) and Carbon Disclosure Leadership Index (CDLI)	October 2012	Carbon Disclosure Project	Activities that reduce greenhouse gas emissions, lower climate change risk, and disclose climate change information
Ranked 17th in Newsweek Green Rankings 2012	October 2012	Newsweek	For consideration of corporate environmental impact, environmental management and information disclosure policies
"Best of Show Award" Special Award (Frontier Challenge Category)	June 2012	Interop Tokyo 2012	Geothermal heat extraction system
21st Century Achievement Award, Environmental Category	June 2012	Computerworld	Response to the Great East Japan Earthquake
Social and Environmental Green Evaluation System(SEGES), Superlative Stage	April 2012	Organization for Landscape and Urban Green Infrastructure	Fujitsu Numazu plant's greening activities

Environmental Performance Data Calculation Standards

■Subject Period : April 1, 2012 – March 31, 2013

■Scope : Fujitsu and Fujitsu Group (For details, refer to the List of Companies Covered by the Report on Environmental Activities (123 companies).)

Operating Activities and Environmental Load (FY2012)

Indicator			Unit	Calculation Method
INPUT				
Development & Design/ Planning & Design Procurement Manufacturing Development	Raw Materials		Tons	Material inputs to our major products*1 shipped in FY 2012 (raw materials per unit for each product × the number of units shipped in FY 2012)
	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 four electrical and electronic business organizations (the Japan Electrical Manufacturers' Association [JEMA], Japan Electronics and Information Technology Industries Association [JEITA], Communications and Information Network Association of Japan [CIAJ], and Japan Business Machine and Information System Industries Association [JBMA]), total amounts handled are provided for those substances handled in quantities exceeding 100kg annually at individual business 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 100kg annually per business site.
	Water use		1,000 m ³	Annual use of clean water, industrial water, and groundwater (Not including groundwater for melting snow and groundwater extracted for purification)
	Energy consumption (calorie basis)		10,000 GJ	$\sum [(\text{Electricity, fuel oil, gas, and district heating and cooling annual usage}) \times \text{Thermal conversion factor for each type of energy}^*1]$ *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 46.1GJ/1,000 m ³ for town gas were used.
		Purchased electricity	MWh	Annual electricity usage
		Bunker A, fuel oil, light oil, benzin, gasoline	Kl	Annual fuel oil usage (or purchases)
		Natural gas	1,000 m ³	Annual natural gas usage (or purchases)
		Town gas	1,000 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 consumption for transportation of goods in Japan		10,000 GJ	Energy consumption related to transportation of goods by the Fujitsu Group within Japan as a part of logistics activities defined under the Act on the Rational Use of Energy (the Energy Conservation Law)
Usage	Energy	Electricity	MWh 10,000 GJ	Electricity consumed in connection with major products*1 shipped during FY 2012 (Amount of electricity used for time estimated per product unit × units shipped in FY 2012)

Collection / Reuse / Recycling	Resource recycling rate		%	Based on the calculation method provided by the 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.
Operation and Maintenance	Processed volume		Tons	
OUTPT				
Development & Design/ Planning & Design Procurement Manufacturing Development	Raw Materials	CO ₂ emissions	Tons	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 FY 2012) for the raw materials used in major products*1 shipped in FY 2012.
	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 four electrical and electronic business organizations (the Japan Electrical Manufacturers' Association [JEMA], Japan Electronics and Information Technology Industries Association [JEITA], Communications and Information Network Association of Japan [CIAJ], and Japan Business Machine and Information System Industries Association [JBMA]), total amounts released are provided for those substances handled in quantities exceeding 100kg annually at individual business 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 100kg annually per business site.
	Atmospheric Release	CO ₂ emissions	10,000 tons	$\sum [(\text{Electricity, fuel oil, gas, and district heating and cooling annual usage}) \times \text{CO}_2 \text{ conversion factor for each type of energy}^*1]$ *1 CO ₂ conversion factor: In FY 2002 and later, the conversion factor for electricity is 0.407 tons CO ₂ /MWh (fixed), 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. The conversion factor for district heating and cooling is 0.061 tons CO ₂ /GJ.
		GHG emissions other than CO ₂	10,000 tons CO ₂	Annual emissions of HFCs, PFCs, and sulfur hexafluoride by four semiconductor plants (Fujitsu Semiconductor Limited's Iwate, Aizuwakamatsu, Mie Plants, and a plant owned by Fujitsu Semiconductor Technology, Inc.) $\sum [\text{Annual emissions for each type of gas}^*1 \times \text{Global warming potential for each gas}^*2]$ *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."
		NOx emissions	Tons	$\text{NOx concentration (ppm)} \times 10^{-6} \times \text{Dry gas emissions (m}^3\text{N/hr)} \times \text{Operating time (hr/yr)} \times 46/22.4 \times 10^{-3}$
		SOx emissions	Tons	$\text{SOx concentration (ppm)} \times 10^{-6} \times \text{Dry gas emissions (m}^3\text{N/hr)} \times \text{Operating time (hr/yr)} \times 64/22.4 \times 10^{-3}$

	Water Discharge	Wastewater discharges	1,000 m ³	Annual water discharges into public waterways and sewers (Not including groundwater used for melting snow)
		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	Total amount for industrial waste and general waste generated by factories and offices (Thermal recycling volume + Material recycling volume + Disposal volume)
		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	CO ₂ emissions from domestic transport		1,000 tons CO ₂	CO ₂ emissions related to transportation of goods by the Fujitsu Group within Japan as a part of logistics activities defined under the Act on the Rational Use of Energy (the Energy Conservation Law). Fuel economy method (for some vehicles) and the improved ton-kilometer method (road vehicles, rail, air, ocean transport).
Usage	Atmospheric Release		Tons CO ₂	Electricity consumption by major products*1 shipped in FY 2012 (Electricity consumed for the assumed hours of use per product x Number of units shipped in FY 2012)

*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.

Green ICT Achievements in Reducing CO₂ Emissions

Indicator	Unit	Calculation Method
ICT infrastructure	10,000 tons	For total products shipped, the difference between new and prior platform products in terms of CO ₂ emitted for a level of functionality similar to that of FY 2008 products (Using eco-efficiency factors in Fujitsu has worked to improve with FY 2012 as its target year.)
ICT solutions	10,000 tons	CO ₂ emissions before and after adoption of environmental solutions and data center outsourcing services by customers, calculated using sales figures and CO ₂ conversion factors. Cumulative results for FY 2009 through FY 2012.

Efforts to Prevent Global Warming and initiatives of reducing CO2 emissions

Indicator			Unit	Calculation Method
Percentage reduction in total greenhouse gas emissions			%reduction	(Total GHG emissions in FY 1990 – Total GHG emissions in FY 2012) / Total GHG emissions in FY 1990 × 100
Adoption of solar power generation			kW	Total rated capacity of solar power generation facilities installed at business sites
Usage based on the Revised Act on the Rational Use of Energy			10,000 kl	Usage of electricity, fuel, etc. in terms of crude oil equivalents, based on the Act on the Rational Use of Energy (the Energy Conservation Law)
GHG Emissions Report based on GHG Protocol Standards	Upstream (Scope3)	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 Environmental Studies Center for Global Environmental Research)
		Capital goods	Tons	Monetary value of capital X 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)
		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)
		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 information on calculation methods, refer to the items on OUTPUT Atmospheric Release “CO ₂ emissions” and “GHG emissions other than CO ₂ ”.
		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 information on calculation methods, refer to the item on OUTPUT Atmospheric Release “CO ₂ emissions”.
	Downstream (Scope 3)	Transportation and distribution (Downstream)	Tons	Transportation of goods within Japan: CO ₂ emissions related to the transportation of goods within Japan by the Fujitsu Group. * For information on calculation methods, refer to the item on “CO ₂ emissions from domestic transport”.

				International Transportation of Goods: Cargo ton-kilometers of international transportation of goods to or from Japan; or, fuel consumption of transportation mode × Ton-kilometers (road vehicles, rail, air, ocean transport); or, emissions coefficient per unit of fuel consumption (road vehicles) (Source: Calculation Guidelines for Logistics Sector CO ₂ Emissions published by the Ministry of Economy, Trade and Industry and Ministry of Land, Infrastructure, Transport and Tourism in connection with the Act on the Rational Use of Energy; and the GHG Protocol Emissions Coefficient Database GHG)
		Use of sold products	Tons	Electricity consumption during product use × Emissions per unit of electricity (Source: Daily averages for FY 2004 – 2008 from the Summary of Electrify Demand and Supply published by the Ministry of Economy, Trade and Industry, Agency for Natural Resources and Energy, Electricity and Gas Industry Department) 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) X Time used (h) / Days X Number of days used / Year X Number of years used. Time used (h), number of days used per year, and number of years used are set according to Fujitsu's internal scenarios.
		End-of-life treatment of sold products	Tons	(Weight of all sold products / Weight of products processed at Fujitsu's recycling centers during the year) × Electricity used at Fujitsu's recycling centers during the year × Emissions per unit of electricity (Source: Electric Power Enterprise (FY 2002 average for 10 electric power companies in Japan, receiving end)
% Reduction in CO ₂ emissions from domestic transport			% reduction	(FY 2008 CO ₂ emissions from transportation of goods inside Japan - FY 2012 CO ₂ emissions from transportation of goods inside Japan) / FY 2008 CO ₂ emissions from transportation of goods inside Japan × 100

Environmental Activities in Factories

Indicator		Unit	Calculation Method
Indicators Related to Waste	% Reduction in the amount of waste generated	% reduction	(Amount of waste generated in FY 2007 – Amount of waste generated in FY 2012) / Amount of waste generated in FY 2007 × 100
	Effective utilization ratio (Japan only)	%	(Amount of effective utilization(Thermal recycling volume and Material recycling volume) / Amount of Waste generated) × 100
Indicators Related to Water-Resources	Amount of recycled water	1,000 m ³	Annual amount of water used for manufacturing and other purposes, then recovered, processed, and used again for manufacturing and other processes
Indicators Related to Chemical Substances	Emissions of specific chemical substances	Tons	Of the substances subject to VOC emission controls and PRTR-targeted substances handled in amounts exceeding 100kg annually at individual Japanese business sites included in the FY 2007 data collection scope, total emissions of 1 of the top 3 emitted chemical substances for the baseline year (FY 2007)
	% reduction in specific chemical substance emissions	% reduction	(Specific chemical substance emissions in FY 2007 – specific chemical substance emissions in FY 2012) / specific chemical substance emissions in FY 2007 × 100

Cost for Environmental liabilities	100 million 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)
Measured value of Groundwater pollution	mg/l	The highest FY 2012 measurements 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.

List of Organizations Covered by the Report on Environmental Activities (123 companies)

	Environmental burden	Transportation	Environmental Accounting	EMS※1
1 Fujitsu Limited	✓	✓	✓	✓
Fujitsu Group companies in Japan (85 companies)				
	Environmental burden	Transportation	Environmental Accounting	EMS※1
1 FUJITSU ADVANCED PRINTING & PUBLISHING CO.,LTD.		✓		✓
2 FUJITSU HOME & OFFICE SERVICES LIMITED.				✓
3 FUJITSU UNIVERSITY				✓
4 KAWASAKI FRONTALE LIMITED				✓
5 FUJITSU REFRE LTD.				✓
6 FUJITSU TRAVELANCE LIMITED				✓
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 ADVANCED SOLUTIONS LIMITED				✓
16 FUJITSU BANKING SOLUTIONS LIMITED				✓
17 SHIGA FUJITSU SOFTWARE LIMITED				✓
18 FUJITSU BROAD SOLUTION & CONSULTING Inc.				✓
19 FUJITSU SOCIAL SCIENCE LABORATORY LIMITED				✓
20 FUJITSU MISSION CRITICALSYSTEMS LTD.				✓
21 FUJITSU YFC LTD.				✓
22 FUJITSU NIIGATA SYSTEMS LIMITED				✓
23 FUJITSU HOKURIKU SYSTEMS LIMITED				✓
24 FUJITSU KYUSHU SYSTEMS LIMITED				✓
25 FUJITSU KAGOSHIMA INFONET LIMITED.				✓
26 FUJITSU FIP CORPORATION	✓			✓
27 NIFTY Corporation				✓
28 G-Search Limited				✓
29 FUJITSU FSAS INC.		✓		✓
30 FUJITSU COMMUNICATION SERVICES LIMITED				✓
31 FUJITSU NETWORK SOLUTIONS LIMITED				✓
32 Fujitsu Frontech Limited	✓	✓	✓	✓
33 FUJITSU SYSTEM INTEGRATION LABORATORIES LIMITED				✓
34 FUJITSU TOKKI SYSTEMS LIMITED				✓
35 FUJITSU DEFENSE SYSTEMS ENGINEERING LIMITED				✓
36 Fujitsu Applications, Ltd.				✓
37 FUJITSU LEARNING MEDIA LIMITED				✓
38 FUJITSU RESEARCH INSTITUTE				✓
39 FUJITSU Marketing LIMITED.		✓		✓
40 FUJITSU FOM LIMITED		✓		✓
41 FUJITSU CoWorCo LIMITED		✓		✓
42 TWO-ONE LIMITED				✓
43 FUJITSU I-NETWORK SYSTEMS LIMITED	✓	✓	✓	✓
44 ECOLITY SERVICE LIMITED			✓	✓
45 FUJITSU ADVANCED ENGINEERING LIMITED				✓
46 Fujitsu Software Technologies Limited				✓
47 FUJITSU MIDDLEWARE LIMITED				✓
48 Fujitsu Kyushu Network Technologies Limited				✓
49 FUJITSU TELECOM NETWORKS LIMITED	✓	✓	✓	✓
50 FUJITSU WIRELESS SYSTEMS LIMITED	✓	✓	✓	✓
51 FUJITSU COMPUTER TECHNOLOGIES LIMITED				✓
52 FUJITSU IT PRODUCTS LIMITED	✓	✓	✓	✓
53 SHIN-ETSU FUJITSU LIMITED	✓	✓		
54 Fujitsu Isotec Limited	✓	✓	✓	✓
55 FUJITSU PERIPHERALS LIMITED	✓	✓	✓	✓
56 FUJITSU PERSONAL SYSTEM LIMITED		✓		✓
57 Shimane Fujitsu Limited	✓	✓	✓	✓
58 FUJITSU KASEI LIMIED	✓	✓	✓	✓
59 Fujitsu Integrated Microtechnologies Limited	✓	✓	✓	✓
60 FUJITSU QUALITY LABORATORY LTD.				✓
61 Fujitsu Optical Components Limited	✓		✓	✓
62 FUJITSU KANSAI-CHUBU NET-TECH LIMITED				✓
63 Fujitsu Mobile-phone Products Limited	✓	✓	✓	✓
64 Fujitsu Mission Critical Software LTD.				✓
65 FDK CORPORATION	✓	✓	✓	✓
66 FUJITSU COMPONENT LIMITED	✓	✓	✓	✓
67 Transtron Inc.		✓	✓	✓
68 FUJITSU ELECTRONICS INC.		✓		✓
69 FUJITSU VLSI LIMITED	✓		✓	✓

70	Fujitsu Semiconductor IT Systems Ltd.				✓
71	FUJITSU FACILITIES ENGINEERING LIMITED				✓
72	FUJITSU Microelectronics Solutions Limited				✓
73	FUJITSU INTEGRATED MICROT TECHNOLOGY LTD.	✓			
74	FUJITSU SEMICONDUCTOR TECHNOLOGY INC.	✓		✓	✓
75	SHINKO ELECTRIC INDUSTRIES CO. LTD.	✓	✓	✓	✓
76	FUJITSU TEN LIMITED	✓	✓	✓	✓
77	FUJITSU LABORATORIES LTD	✓		✓	✓
78	FUJITSU SEMICONDUCTOR LIMITED	✓	✓	✓	✓
79	Fujitsu Design Limited				✓
80	Fujitsu Advanced Technologies Limited				✓
81	TOCHIGI FUJITSU TEN LIMITED			✓	
82	FUJITSU MOBILE COMMUNICATIONS LIMITED				✓
83	Fujitsu Systems West Limited				✓
84	Fujitsu Systems East Limited				✓
85	FUJITSU CAPITAL LIMITED				✓

Fujitsu Group companies in worldwide(37companies)		Environmental burden	Transportation	Environmental Accounting	EMS※1
1	FUJITSU COMPUTER PRODUCTS OF VIETNAM, INC.	✓		✓	✓
2	Jiangsu Fujitsu Telecommunications Technology Co., Ltd.				✓
3	Fujitsu Semiconductor Asia Pte. Ltd.				✓
4	Fujitsu Semiconductor Pacific Asia Limited				✓
5	Fujitsu Semiconductor (Shanghai) Co., Ltd.				✓
6	FUJITSU HONG KONG LIMITED				✓
7	FUJITSU DO BRASIL LIMITADA				✓
8	FUJITSU ASIA PTE.LTD				✓
9	FUJITSU NETWORK COMMUNICATIONS, INC.	✓		✓	✓
10	Fujitsu America, Inc.				✓
11	Fujitsu Systems Business (Thailand) Ltd.				✓
12	Fujitsu Semiconductor Design (Chengdu) Co. Ltd.				✓
13	Fujitsu PC Asia Pacific Pte Ltd.				✓
14	FUJITSU TELECOMMUNICATIONS EUROPE LTD.			✓	✓
15	FUJITSU AUSTRALIA LTD.				✓
16	FUJITSU TECHNOLOGY SOLUTIONS (HOLDING)	✓		✓	✓
17	Fujitsu Semiconductor Europe GmbH				✓
18	Nanjing Fujitsu Nanda Software Technology Co., Ltd.				✓
19	FUJITSU SERVICES HOLDINGS PLC (UK&I)				✓
20	FUJITSU SERVICES HOLDINGS PLC (Nordic)				✓
21	FUJITSU KOREA LTD.				✓
22	FUJITSU TAIWAN LIMITED				✓
23	Fujitsu Telecommunication Asia Sdn. Bhd.				✓
24	FUJITSU VIETNAM LIMITED.				✓
25	FUJITSU (MALAYSIA) SDN. BHD.				✓
26	P. T. FUJITSU SYSTEMS INDONESIA				✓
27	Fujitsu Philippines, Inc.				✓
28	FUJITSU (CHINA) HOLDINGS CO., LTD				✓
29	Fujitsu Management Services of America, Inc.				✓
30	FUJITSU (XI'AN) SYSTEM ENGINEERING CO., LTD.				✓
31	Beijing Fujitsu System Engineering Co., LTD.				✓
32	GLOVIA International, Inc.				✓
33	FUJITSU AUSTRALIA SOFTWARE TECHNOLOGY PTY. LTD.				✓
34	FUJITSU Enabling Software Technology GmbH				✓
35	Fujitsu Semiconductor America, Inc.				✓
36	Fujitsu Semiconductor Korea Limited				✓
37	Fujitsu Research and Development Center Co., LTD.				✓

※1 EMS: Environmental Management System

Chapter II

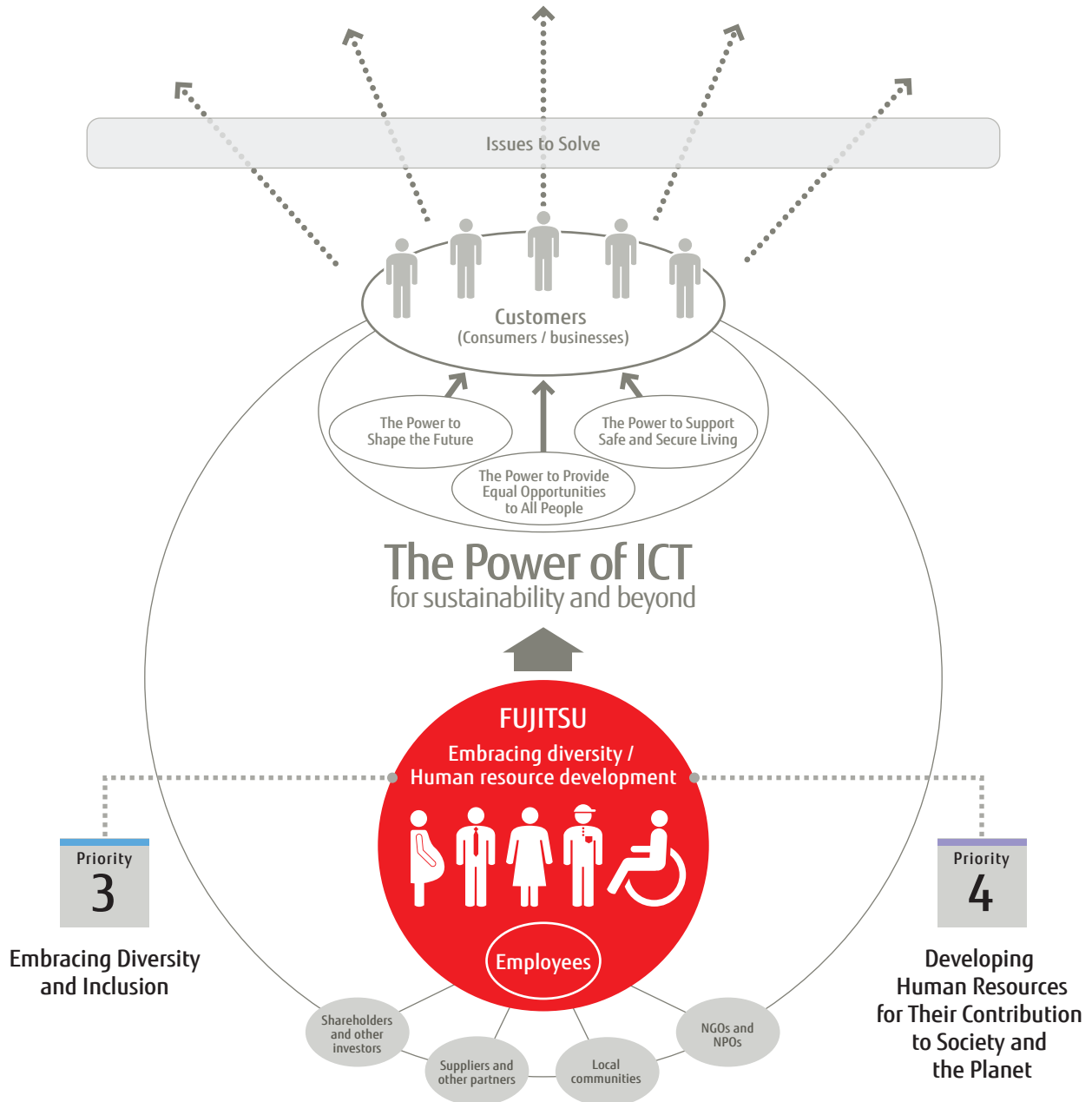
The Power of ICT
for sustainability and beyond

by Our People

Reinforcing the Foundation of CSR Activities through
Human and Workplace Development



Contributing to Sustainable Futures for the Earth and Society



Employees underpinning the activities of a global ICT company

The Fujitsu Group has specified 5 priorities for its efforts to strengthen the foundation of its CSR activities.

The first is "Embracing diversity and inclusion." Throughout the world, 170,000 employees of various nationalities and ages work for the Fujitsu Group. The Fujitsu Group aims to create workplaces where individuals accept diversity and there is mutual respect or individual differences, and seeks to promote

the mutual development of companies and individuals.

Another of the five priorities is to develop human resources for their contribution to society and the planet. In practicing CSR-conscious management, the Fujitsu Group devotes considerable effort to the development of human resources that are highly motivated to contribute to sustainable futures for the Earth and society.

Diversity and Inclusion

Embracing Diversity and Inclusion

Based on the statement "We respect diversity and support individual growth" in the Corporate Values of the Fujitsu Way, in 2008 we set up the Diversity Promotion Office as an organization to promote respect for diversity throughout Fujitsu.

The Diversity Promotion Office's vision for Fujitsu sets forth the following two objectives:

- Improving individual growth and job satisfaction
That all employees will have mutual respect for one another, that each will demonstrate their own personal added value, and that everyone will contribute to the organization.
- Improving corporate competitiveness and growth
That we will continue to create new knowledge and technologies through free and active discussions from a variety of viewpoints.

To achieve these two objectives, we are aiming to create workplaces where people can work energetically, create new value, realize coexistence and mutual prosperity with society, and develop Fujitsu into an even better company.

Efforts at Promoting Diversity

To review the status of its diversity promotion, Fujitsu has been carrying out an annual survey of all corporate officers, employees and temporary staff. Based on the results of this survey we are focusing on the following three measures: (1) a reform of mindset and culture in the organization; (2) support for individual success; and (3) promotion of diverse styles of work and improvements to productivity and individual satisfaction.

From FY 2008 through FY 2010, as our first medium-term plan, Fujitsu worked to create policies that foster awareness and understanding of diversity so as to create a basis for diversity promotion. In addition to publishing the results of questionnaires and interviews with top management in internal publications, we have introduced role models^{*1} and various efforts on our Diversity Promotion Office website (in both Japanese and English). We also held a variety of company events, including companywide diversity promotion forums, various networking events, and forums with individual themes, which were well attended by our employees. A number of different level-specific training sessions for executives and managers have also been held. At the end of FY 2010, we conducted an e-learning program open to all executives, regular and temp employees called "Striving for Workplaces Where Everyone Can Thrive," designed to put diversity promotion into practice in the workplace.



Company-wide diversity promotion forum

In addition to past and ongoing activities, with understanding and achievement of diversity as the goal, we are working to achieve the following three objectives in light of individual problems that came to light through earlier activities, setting goals, and implementing solutions in the workplace as our second medium-term plan for the period from FY 2011 through FY 2013.

- Support workplace activities designed to promote diversity
- Support active participation by female employees
- Promote measures among Group companies in Japan

^{*1} Role models:

In general, people whose conduct functions as a guide or example for others.

Diversity Targets and Results

	Period	Target	Key Measures
1	2008-2010: Awareness and Understanding	<ul style="list-style-type: none"> Foster awareness and understanding of diversity promotion among all corporate officers and employees 	<ul style="list-style-type: none"> Conduct surveys of employee awareness of diversity Implement e-learning programs Build human networks for female, disabled, and foreign employees
2	2011-2013: Understanding and Practice	<ul style="list-style-type: none"> Promote workplace diversity Support more active participation by female employees Promote measures among Group companies in Japan 	<ul style="list-style-type: none"> Select managers to represent diversity promotion in business units and hold study meetings. Determine the actual status of workplaces through interviews of division managers Set quantitative targets for active participation by female employees and conduct training Hold briefings for domestic Group companies, hold events for employees of domestic Group companies
3	From 2014: Practice and Business Contribution	<ul style="list-style-type: none"> Promote measures among domestic and overseas Group companies Generate new business and increase productivity by practicing diversity and inclusion 	Formulate additional measures based on the track record through FY 2013

FY 2011 Overview and Key Issues

In FY 2011, we entered the "understanding and practice" phase of diversity promotion activities. Fujitsu positions diversity as a management imperative, and pursues ongoing and wide-ranging initiatives.

At the company-wide diversity promotion forum, for example, this commitment was demonstrated by not only opening addresses by the president and vice-presidents but also a speech by the former external director, Masayasu Kitagawa, and in other ways, as well.

In FY 2012, we continued the three measures we launched in FY 2011 while also continuing phase one measures.

As for the development of diversity measures in the workplace environment, we conducted interviews with heads of units to determine the current status of each workplace and the extent to which the intentions of top management have taken hold. Based on the results of these interviews we will consider, through FY 2013, measures that will lead to concrete actions at the workplace level.

In support of greater participation by female employees, we are taking positive action to achieve the targets established in FY 2011 (women comprising 20% of the workforce and 20% of newly appointed managers by FY 2020). These actions have included ongoing selective training for female employees, as one example. Meanwhile, initiatives to expand the promotion of diversity efforts to Fujitsu Group companies in Japan have included encouragement to participate in various Fujitsu-sponsored events, the conduct of a survey on the promotion of diversity, and the provision of e-Learning opportunities.

As a special addition to the FY 2012 diversity survey, which was conducted among all executives, employees, and temporary employees, we asked additional questions about matters like workplace management, desires for promotion to management-level positions, and the ease or difficulty of using the child care / nursing care and other systems. Future measures and other responses will be considered based on the results of the survey.



Diversity Promotion Office
Noriko Shiono, Vice President

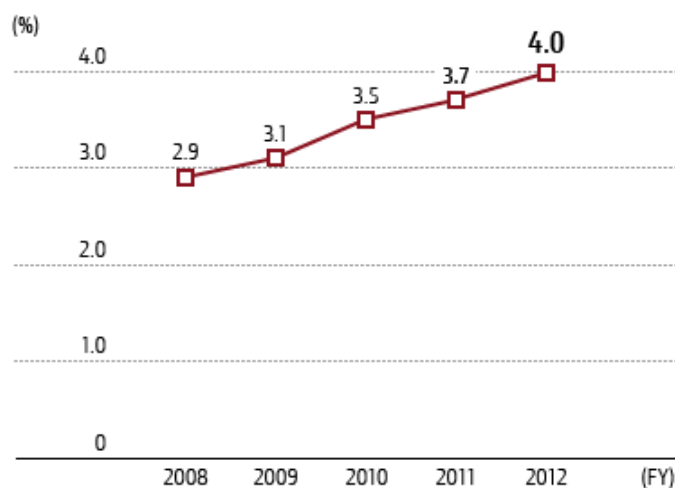
Creating a Workplace Environment Where Female Employees Can Participate Actively

As an immediate high-priority issue, Fujitsu is setting quantitative targets to reliably create significant numbers of female managers, while promoting activities to achieve these targets.

In more specific terms, we are selecting people from the leadership level of our female employees and, in coordination with the relevant workplace, management level, HR division, and the Diversity Promotion Office, establishing and implementing training programs appropriate for these individuals as candidates for promotion. For other levels of employees, we also hold workshops and events to encourage them to review their careers and envision their future career path. We are also planning and implementing networking events as opportunities to receive fresh encouragement from others. Furthermore, to help our female employees improve their self-esteem and enhance job satisfaction, we hold forums for all our female employees and giving publicity to role models. Starting in FY 2011, as a new effort, we are setting up "diversity mentors" who will support the personal and career development of our female employees from a different standpoint than their immediate supervisors.

Note that we use the same recruitment standards regardless of gender with respect to promotion of managers.

Trends in Women Managers (Fujitsu Limited)



Positive Action for Female Employees (from FY 2011)

Female Leadership Development Program

Fujitsu has initiated the Female Leadership Development Program, designed to support long-term career furtherance by its female employees. Through the program, Fujitsu is developing human resources to serve in leadership roles, while grooming future management staff.

Open to members selected by each division, this roughly half-year program seeks to boost awareness of career options and develop managerial skills through intensive classes centered mainly on team activities, coupled with on-the-job training. Diversity mentors, acting as team activity advisors and role models, provide advice and guidance, and each team offers its own suggestions to management at the end of the program.

To enhance effectiveness, the program is conducted in coordination with key staff members from worksites, management, personnel, the Diversity Promotion Office, and Fujitsu University, who all work together for the program's success.



Scene from the Female Leadership Development Program

Employment of People with Disabilities and Creating Workplaces Where They Can Play an Active Role

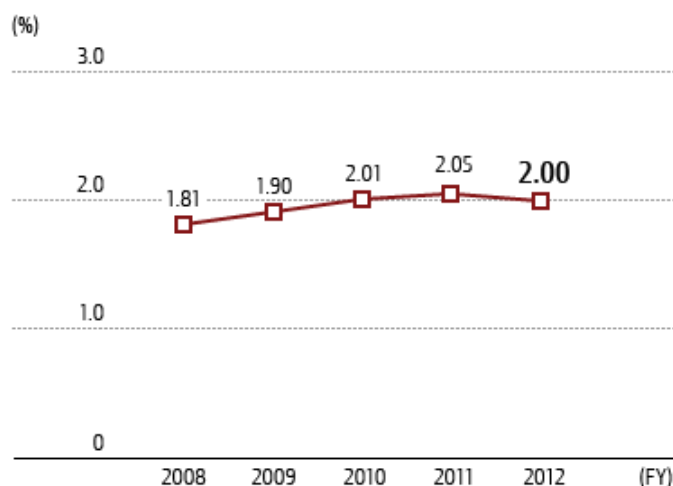
Fujitsu employs people with disabilities without limitations on where they may work. People with disabilities, therefore, are working in a wide variety of positions, including as researchers, developers, sales staff, and systems engineers.

To hire people with disabilities, we have prepared a dedicated website and included in it specific information on actual cases of people with disabilities working at Fujitsu. In determining workplace assignments, we work together with the workplace to bring out the best of the individual's abilities, and after the assignment we hold interviews. Thus, we implement long-term follow up from initial human resource development until the employee is established.

In addition, Fujitsu holds forums on the creation of networks of disabled employees and the creation of workplaces where everyone can produce results regardless of any disability they may have. Moreover, we publicize on our intranet role models and manuals for workplaces that can accept disabled employees.

As a result, the percentage of people with disabilities employed by the Fujitsu in FY 2012 was 2.00%, exceeding rate of 1.8% mandated by law.

Trend in Employment Rate of People with Disabilities (Fujitsu Limited)



VOICE: Feedback from Employees

Active participation by employees with lower-limb disabilities

As an attorney at Fujitsu, I have enjoyed a rewarding career supporting the activities of various divisions. I frequently travel throughout the country for meetings with customers. When I took up my position here, I, of course, felt some uncertainty, but I found that doors open when one rises to challenges.

The most rewarding times are when my efforts to take a bird's eye view of a situation, and explain the details, succeed in communicating benefits to the customer and result in the signing of a win-win agreement. The most attractive aspect of my work is that I can feel the dynamism of Fujitsu's ICT business.



Legal Unit, Legal Div.,
Business Affairs, Manager
Atsushi Moriyama

Recruitment of Global Talent

With sights on global business expansion, Fujitsu takes part in career forums in and outside Japan geared to foreign students, as well as holding its own seminars and accepting university students from abroad for internships. Through these and other actions, Fujitsu is recruiting foreign nationals studying in Japan and university graduates from other countries. In FY 2012, we hired 33 foreign nationals, bringing the total working at Fujitsu to 254 as of March 31, 2013.

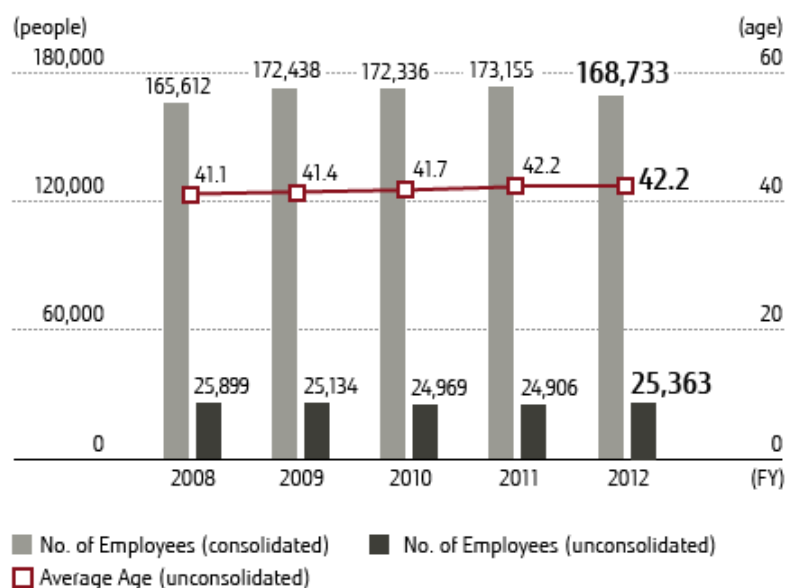
Support for Foreign Employees in Japan

Fujitsu started the Integr8 project in 2007 to enable international employees based in Japan to contribute and utilize their full potential as part of a global workforce. The community consists of over 400 Japanese and international employees who participate in various activities that promote diversity in the workplace.

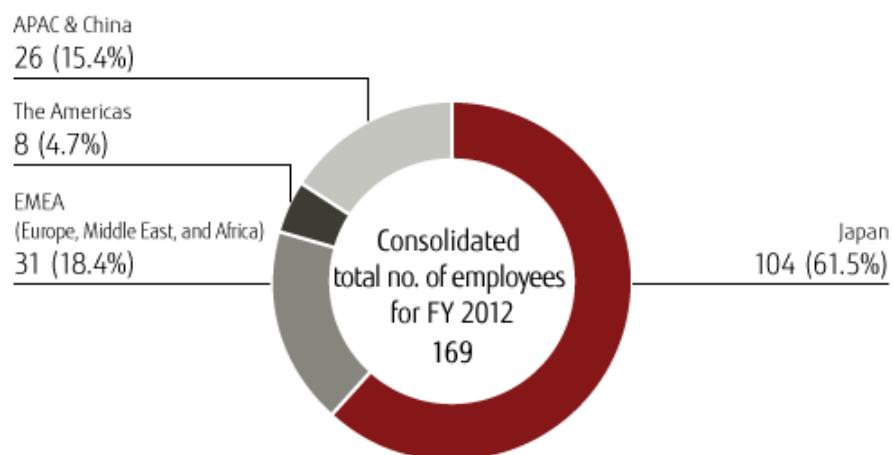
Integr8's English website provides information necessary for living in Japan, Fujitsu's policies, as well as an HR support system to address individual needs of employees. As part of our efforts to form a community that connects international and Japanese employees, Fujitsu invites both internal and external speakers to talk on important topics, such as Fujitsu's globalization strategy. With a total of 235 participants for the three events in FY2012, these events are well received by Integr8's international members.

Integr8 encourages global communication by publishing an internal magazine in which employees worldwide can contribute articles and share their perspectives. Future efforts include workshops for managers supervising international employees and networking events for the community.

Trends in Numbers and Average Ages of Employees



Employees by Region



Creating a Workplace Environment in which Older Workers Can Thrive

Fujitsu has established a post-retirement rehiring system aimed at providing opportunities to retirees who desire to continue work after the retirement age of 60, and who want to make the best use of their abilities.

Efforts Promoting Respect for Human Rights

Respecting Human Rights

The shared values articulated in the Code of Conduct of the FUJITSU Way are guidelines for each employee to comply with in conducting daily business operations. Prime among them is "We respect human rights," a principle that underpins all our corporate and individual activities and disciplines the actions of every member of the Group.

We have stipulated policies for human rights in employment. We continue to work for equal employment opportunities, respect for human rights, elimination of discrimination, and the prohibition of forced labor and child labor. While we publish these policies on our website, we take every chance for education or enlightenment that will promote understanding and penetration of these policies.

Fujitsu has publicly announced its support for the ten principles of the United Nations Global Compact and will continue to move forward with management that places a high priority on human rights.

FUJITSU Guiding Principles of Respect for Human Rights in Employment (Full Text)

With a view to realizing our growth and profits, respect for human rights must be an integral part of our business culture. FUJITSU is committed to creating a culture in which employees respect the dignity and worth of individuals. To this end, FUJITSU will strive to foster respect for human rights in all the countries and regions where we operate our business while providing an environment that encourages employees to understand and realize importance of human rights.

1. Equal Employment Opportunity and Respect for Human Rights

FUJITSU strives to provide equal employment opportunities.

FUJITSU is committed to treat our employees with no illegal discrimination based on race, color, religion, creed, sex, social status, lineage, physical or mental disability, sexual orientation and any other legally protected category that is unrelated to the legitimate interests of FUJITSU.

2. Compliance with Employment Laws and Regulations

FUJITSU adheres to the applicable laws and regulations of the countries and regions in which it operates in treating our employees.

3. Prohibition of Forced Labor / Child Labor

FUJITSU will not use any form of forced or compulsory labor.

FUJITSU will not use child labor.

4. Work Environment

FUJITSU strives to achieve and maintain a healthy and safe work environment that motivates its employees.

Promoting Human Rights Enlightenment

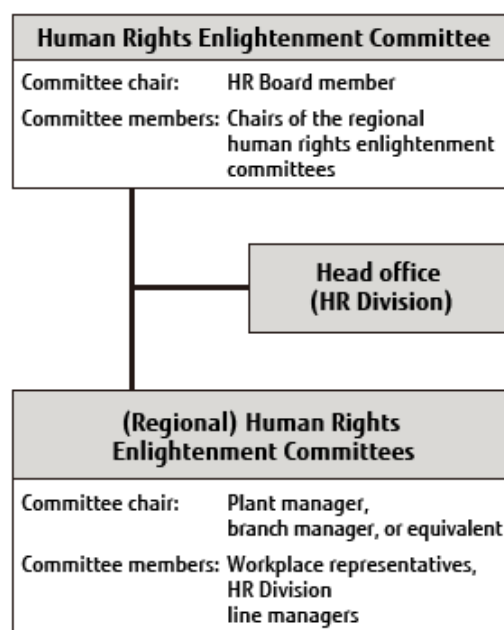
In the Fujitsu Group, we implement activities to promote human rights awareness through the Human Rights Enlightenment Committee, which is chaired by the board member in charge of human resources. Regional human rights enlightenment committees comprised of regional workplace representatives act as implementation organizations, and group companies have established similar committees.

The head office of the Human Rights Enlightenment Committee regularly check on the status of activities and issues at regional and group company human rights enlightenment committees. Findings are used by Human Rights Enlightenment Committees to summarize activities and set directions for the pursuit of ongoing, systematic enlightenment activities.

In line with the directions set by the Human Rights Enlightenment Committees, individual regions and group companies undertake training and enlightenment activities that are based on common training content for all companies and adjusted for the specific circumstances of the region or group company. Buraku discrimination, harassment, and other problems are taken up in training held for those who have been promoted and other training conducted during the year.

Furthermore, in conjunction with Human Rights Week every December, we work to foster an environment in which everyone can think about and discuss human rights to promote respect for human rights in households and local communities with connections to the Fujitsu Group. Examples of these efforts include the hanging of posters on human rights enlightenment, contests in which employees and their families come up with slogans on human rights enlightenment, and the distribution of human rights enlightenment leaflets.

Human Rights Enlightenment Structure



Consultation Services and Human Rights Monitoring

In an effort to create an environment where each individual employee can work with peace of mind and fully exercise their capabilities, the Fujitsu Group has established internal consultation services to which employees may bring their human rights concerns. These services have been established in each region as well as at our headquarters to make it easy for employees to raise their human rights concerns.

Contact information for human rights consultation services are posted on our intranet and made known to employees via posters and other means, and regular training is held for personnel engaged in the provision of consultation services, so that they can perform their roles appropriately.

The personal information and privacy of employees who make use of the consultation services are protected. This is to enable employees to seek advice on matters like relationships with coworkers, harassment, and troubles and doubts concerning human rights, and ensure the consultation services are able to help improve workplace environments.

Matters brought to the attention of consultation services are reported - with proper precautions to protect personal information and privacy - to Human Rights Enlightenment Committees and regularly communicated to corporate auditors. This is done to monitor use of the consultation services and to use information on the reported matters to prevent recurrences.

Human Rights Consultation Service

Group Consultation Service	Regional Consultation Services
Receives consultations from all business sites	Established as consultation services in closer proximity to employees

Names and contact information for consultants are clearly communicated to employees, so they can choose a service to consult.

Human Rights Due Diligence Scheme

The Fujitsu Group, in accord with the FUJITSU Way, employs a process that follows a PDCA cycle and is led by the Human Rights Enlightenment Committee to elevate both awareness of human rights issues and the management level at which they are addressed. In FY 2012, we embarked on the establishment of a human rights due diligence scheme that covers the entirety of our global value chain.

In FY 2012, we also held a stakeholder dialogue to which we invited human rights experts. This dialogue helped relevant personnel achieve a deeper understanding of the United Nations Guiding Principles on Business and Human Rights (the Ruggie Framework) and enabled the emergence of a shared understanding of human rights issues related to our business activities.

- [Communicating and Collaborating with Stakeholders](#)
- [Stakeholder dialogue](#)

In accordance with the ISO26000 standard, we prepared a written survey that we fielded among a total of 117 Group companies inside and outside Japan to check the status of human rights initiatives throughout the Fujitsu Group.

- [Basic Policy on CSR \(CSR activities applying ISO26000\)](#)

In support of the establishment of the human rights due diligence scheme, measures for promoting greater understanding of human rights, and measures for identifying, and directions to take with regard to, risks throughout the entire value chain are scheduled for development in FY 2013.

Initiatives led by the Human Rights Enlightenment Committee



Initiatives for Preventing Forced Labor and Child Labor

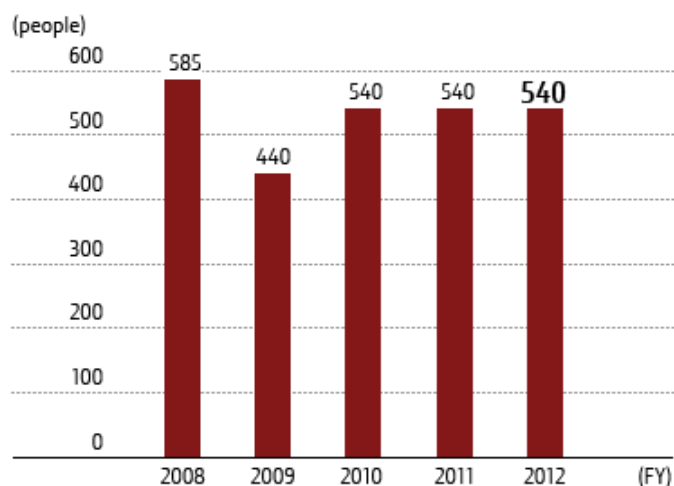
The Fujitsu Group has set forth its Guiding Principles of Respect for Human Rights in Employment and stipulated that it will not use forced labor or child labor. In FY 2012, we conducted a written CSR survey based on the ISO26000 standard among our 80 Group companies in Japan and 40 Group companies overseas. Through that survey, we confirmed information on initiatives for the prevention of forced labor and child labor.

We also make our business partners aware of the Fujitsu Procurement Guideline, which includes provisions on the elimination of forced labor and child labor. In FY 2012, we asked our 743 primary suppliers to complete a written survey on the status of CSR initiatives, including steps for the elimination of forced labor and child labor.

Striving to Provide Equal Opportunity in Employment and Advancement

Together with our employment policy of not discriminating by age, gender, nationality, or other factors, we offer opportunities for promotion once someone has reached a stage commensurate with general competence and performance. We are also strengthening our multifaceted efforts to increase equality of opportunity, including the introduction of a rehiring system for those who leave Fujitsu to raise children or care for infirm or elderly family members, and the proactive promotion of women employees to management positions.

Hiring of Recent College Graduates (Fujitsu)



Average Years of Service

	FY 2008	FY 2009	FY 2010	FY 2011	FY 2012
Male employees	18.4	18.8	19.0	18.8	18.9
Female employees	16.3	16.4	16.7	16.4	16.3

Creating Good Working Conditions

Arranging support environments for compatibility between work, pregnancy, child care, and nursing care needs

Fujitsu is committed to providing a work environment that is easy to work in, allows employees not only to work but also to raise children or care for family members, and supports a diverse range of work styles so that all our employees can fulfill their potential. In accordance with the Law for Measures to Support the Development of the Next Generation, we have established and implemented our action plans^{*1}. In addition, we provide babysitter subsidies, paid leave to honor long-term service as well as volunteer activities, and we have established and are operating in-house childcare facilities at some of our sites. Furthermore, we conduct a forum to assist employees who are taking child care leave to return to the workplace and help them build networks. In FY 2012, we expanded eligibility for participation to include employees who are currently pregnant and employees who have just returned to the workplace.

In addition, in June of FY 2012, we conducted a survey to gain information on employees' needs regarding the provision of nursing care. This survey was conducted among employees 40 or older at two Fujitsu Group companies. Survey results have been posted on an internal website and made available to employees through other means as well. They will be used to help employees who are providing nursing care do so in balance with work responsibilities and in a way that allows them to go about their work activities with a sense of purpose and worthwhileness.

We followed up on survey results with September forums covering topics including public nursing care services that are in high demand and internal information on nursing care. Targeted at Group company employees who are currently providing nursing care or are interested in the topic, this forum was intended to give participants a chance to think about ways to balance nursing care with work and about steps that would allow them to continue working while providing nursing care.

*1 action plans:

Based on the Minister of Health, Labour and Welfare's approval of our first action plan (April 1, 2005 to March 31, 2007), second action plan (April 1, 2007 to March 31, 2010), and third action plan (April 1, 2010 to March 31, 2013), we have established and are now implementing our fourth action plan (April 1, 2013 to March 31, 2015).



Logo mark stipulated by the Minister of Health, Labour, and Welfare according to Article 14, Item 1 of Japan's Law for Measures to Support the Development of the Next Generation (Next-generation approval mark)



Number of Employees Using the Care Leave Support System (FY 2012, Fujitsu Limited)
(People)

System	Total ^{*2}	Men	Women
Child care leave	186	4	182
Family care leave	6	4	2
Reduced working hours (child care)	539	13	526
Reduced working hours (family care)	5	0	5
Paternity leave	510	510	-

*2 Numbers of Users:

Figures include employees who have continued to use the system from the previous fiscal year. The percentage of employees who return to the workplace after taking child care leave is nearly 100%, for both men and women.

Forums that aim at reforming the way we work

We are implementing a variety of forums to improve both productivity and individual job satisfaction and fulfillment based on the many different ways people work with the theme "Reforming the Way We Work."

Although we focused on understanding differences in ideas through FY 2009, we have been implementing training based on concrete, practical measures since the FY 2010 forums. In December 2012, we held forums on reforming the way we work so appropriate attention can be paid to both work and nursing care needs.

These forums, which were held for Group company employees, as well, consisted of talks and group discussions and were intended to give participants an opportunity to develop their understanding of job approaches, and make immediate changes, that would allow them to balance nursing care and work, and continue working with a sense of worthwhileness.

Promoting Diverse Work Styles

So that each and every one of our employees can work efficiently to create even higher added value, Fujitsu has adopted satellite office and mobile work tele-work options in addition to a work-from-home system.

In addition, we are promoting work styles that apply global communication platforms to further the endeavors of our diverse workforce.

Fujitsu Tele-work System

Type	Definition of workplace	Remarks
Work from home	Home	Implemented April 2010
Satellite office	Office other than main office • Fujitsu or Fujitsu Group business offices (excluding offices where an employee is stationed)	Previously implemented
Mobile work	Locations other than main office • Customers' sites, hotel rooms on business trips, etc.	Previously implemented

Measures to Energize Communication

Labor Relations

Based on labor-management agreements with the Fujitsu Labor Union, Fujitsu holds discussions about various employment conditions and explains management policies and business conditions, along with business reorganization and other matters, to its employees through regular and ad hoc meetings such as the Labor Council or Productivity Council. Furthermore, these agreements stipulate the collective bargaining rights of the union.

Note that since Fujitsu adopts a union shop system, all ordinary employees are members of the Fujitsu Labor Union.

In Europe, the Fujitsu European Annual meeting has taken place every year since 2000, with the overall financial conditions of the Fujitsu Group and other issues shared with the employee representatives from Fujitsu Group companies.

Topics

Ongoing Implementation of Measures for Creating an Even Better Labor Environment in China

While China is maintaining a high rate of economic growth, it is also creating conditions that protect the position of the worker and promote greater social stability. At the 18th National Congress of the Communist Party of China, held in November 2012, the right of workers to collectively bargain with management for compensation was clearly put forth for the purpose of securing fairness in income distribution. Furthermore, the July 2013 implementation of the revised law on temporary staffing will strictly define work that can be performed by temporary staff, and accelerate the movement toward the hiring of workers as full-time employees.

To swiftly and appropriately address these developments, Fujitsu Group companies in China have actively worked, through personnel community workshops and other means, to provide even better working conditions and further enhance working environments, including rigorous enforcement of compliance.

Within the Fujitsu Group are companies that early on adopted collective bargaining processes for discussing and establishing working conditions, including compensation, and they will continue with the expansion of this trend moving forward.

These companies have also enlisted the input of experts in considering and appropriately responding to the revision and implementation of various labor laws including the law on temporary staffing. In so doing, they are working to create conditions that will allow employees to work with peace of mind.

Employee Satisfaction Survey

To gauge the dynamism of an organization and assess the level of employees' satisfaction therein, we have taken a multi-faceted employee satisfaction survey every year since 2004.

The content of this employee satisfaction survey is basically kept the same every year to ensure that we can compare changes over the years. That said, the survey content is revised as necessary to address various changes in the environment surrounding the Company and management priorities. In the FY 2012 survey, we added questions on the status of organizational reform initiatives and discretionary power, with an eye toward creating an organizational culture in which individuals can more actively take on challenges. This survey was conducted among approximately 87,000 employees (of which about 30,000 are Fujitsu employees), including people working at 81 Group companies that requested it.

Looking at changes at Fujitsu over the years, we maintained a high response rate in this survey, as in FY 2011, with a response rate of 88.7% this year. In addition, the degree of overall satisfaction has increased every year. The percentage proud to work at Fujitsu surpassed 80%. Responses indicated that 1) employees who feel they are being presented with challenging work opportunities and have adequate discretionary power tend to have a high level of overall satisfaction and 2) that organizations with high overall satisfaction also elicit high satisfaction in terms of "shared direction" and "creation of opportunities for communication." Recognizing these points as key for increasing satisfaction, we are providing organizations with information on them and on examples of actual initiatives that succeeded in increasing employee satisfaction.

Furthermore, we use the survey results to review our Company policies such as personnel systems. With the employee satisfaction survey as our starting point, we will promote measures based on both organization and Company policies to ensure that Fujitsu remains a company where each employee can raise his or her own worth and work with pride and purpose.

Group Efforts in Overseas Business

Beginning in FY2011, the Fujitsu Group conducted its first employee engagement survey of all international business group employees (some 47,000 persons, in Japan and overseas). The intent of this survey is to help create work environments that are more pleasant and worthwhile for employees to work. It has focused on the degree of employee proactive commitment to (or engagement with) the organization or management and on identifying the elements involved in that commitment.

Employees who are engaged tend to be proud to be working at Fujitsu, and make every possible effort for colleagues and customers, and thereby become supporters of the Company. Generally, it is thought that in companies where they have a high level of engagement, employees work harder than is required and actively contribute to the success of business, thereby achieving superior business results, productivity, and customer satisfaction.

The overall response rate for the FY 2012 survey was 76%. In response to questions related to engagement, such as "Do you feel motivated to go beyond your formal job responsibilities?" on average 63% of employees in the international business group responded positively (whereas 21% responded "cannot say" and 16% said "no").

Since survey responses and individual elements directly related to engagement differ even within the Group, each organization created and implemented its own action plan based on FY 2011 survey results. We evaluated the progress of these action plans continuously over a period of one year following implementation to improve employee engagement in all organizations within the Group. As a result, many workshops were held and initiatives were taken at individual business sites and organizations in FY 2012. Both positive points and issues requiring attention were delved into based on the FY 2012 survey results, and new initiatives to make improvements particularly in organizational culture, human resource development, and communication have been taken.

In FY2013, the employee engagement survey will again be conducted, with the aim of creating environments that enhance employee commitment and support employee initiatives.

Occupational Health and Safety and Health Management

Efforts to Improve Occupational Health and Safety

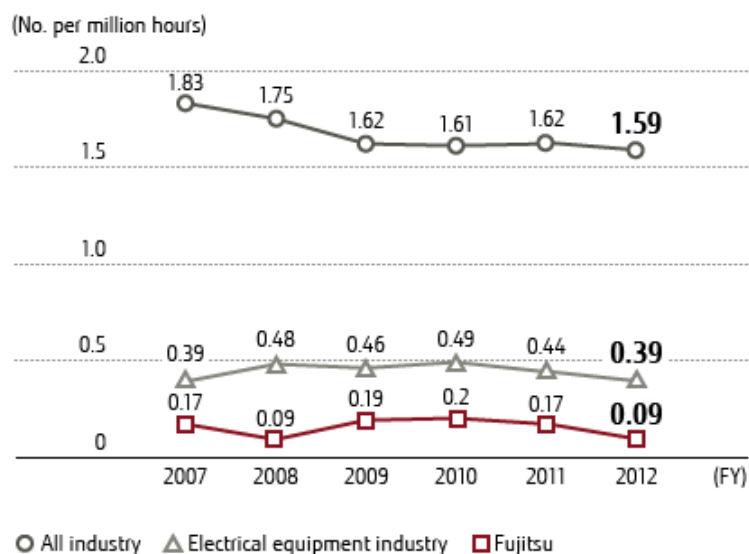
Based on the Corporate Values of the Fujitsu Way, we work to ensure the safety of employees by providing work environments where people can work in safety and comfort.

In Japan, management and labor have jointly established a Central Occupational Health and Safety Committee, which meets annually, and a direction has been established for all companies to follow regarding occupational health and safety. The occupational health and safety management organizations at individual business sites hold monthly meetings of their Occupational Health and Safety committees. These committees establish directions for the unique characteristics of the business site, based on company-wide directions, and work to create safe, healthy workplaces. Each business site's occupational health and safety management organization also performs workplace inspection tours and takes other steps to check for and rectify dangerous locations and factors that may impair health, while conducting risk assessments.

In FY 2012, individual business sites undertook safety and health education, and other measures, to help prevent accidents due to falls.

We will continue to promote health and safety education and training that match the characteristics of each workplace to create a workplace environment in which all our employees can work confidently in safety and comfort.

Frequency of Industrial Accidents (Fujitsu Limited)



Building a Culture Where Employees Can Work Confidently and Positively Through Efforts to Maintain and Enhance Health

The Fujitsu Group, in order to create environments where each individual employee can confidently and positively engage in his/her work, is undertaking activities that seek to maintain or enhance the health of employees and their families, and elevate health literacy (knowledge of health-related matters).

Health enhancement activities are held for all employees, so that health management investments are apportioned not only to employees requiring medical care but also employees who are healthy. Health consultations are conducted for individual employees to help prevent lifestyle-related and mental illnesses, and targeted education and health talks are held to enhance health. Our activities, however, go beyond such individual self-care support and include organizational stress tests for boosting productivity, and activities aimed at supporting improvements in workplace environments.

In support of employee health, each business site has established a health promotion center or health care center to provide physical or mental health counseling and other services to employees requiring them. Eligibility for health support services includes not only employees and their families but also retirees.

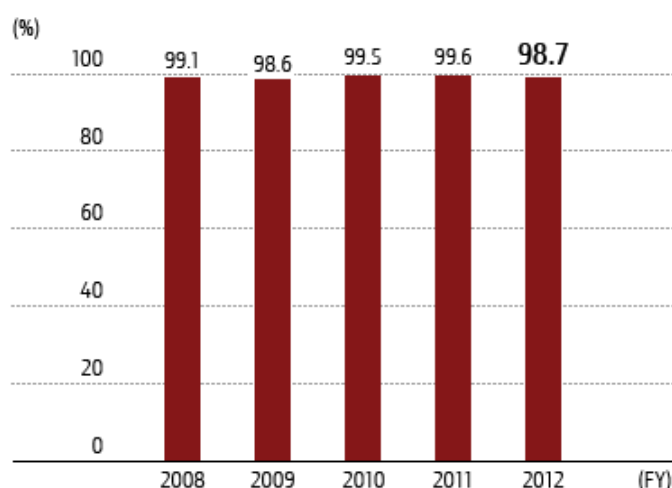
Health Management and Enhancement Initiatives

Implementing Health Checkups

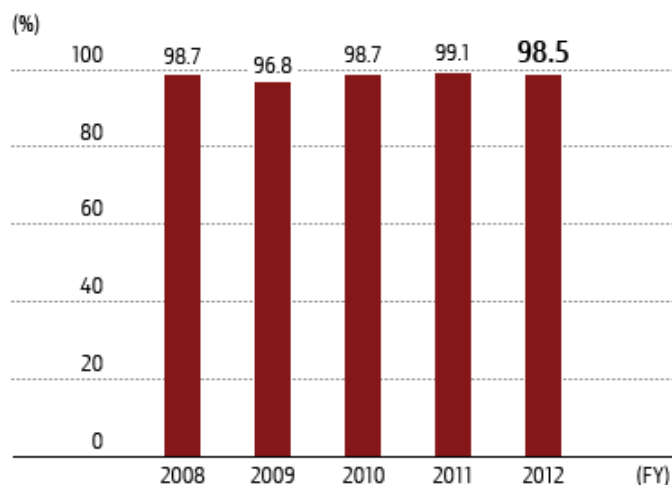
The Fujitsu Group conducts regular health checkups, checkups for lifestyle-related illnesses, special health examinations, and physical examinations for employees putting in significant amounts of overtime. Results are made available to employees via a system they can access from their own desk as an added measure to encourage self-management of personal health.

Activities aimed at early detection of diseases are undertaken in collaboration with the Fujitsu Health Insurance Organization, and a subsidy system has been created to help defray costs related to gynecological and obstetric examinations, and simple brain and lung checkups.

Rate of Periodic Checkups (under age 40, excl. age 35)



Rate of Chronic Illness Checkups (age 30, 35 and above 40)



Efforts to Enhance Health and Fostering a Self-Care Mindset

To help ensure that health-related investments extend to all employees, the Fujitsu Group pursues health enhancement activities and works to foster a self-care mindset to improve employee health.

As part of this effort, we hold walk rallies and other health promotion activities in which all employees can participate, healthy lunch seminars and other dietary education activities, activities aimed at helping employees stop smoking, women's health education activities, and other activities as well.

Specified Health Examination and Specified Health Guidance Initiatives

We are working with the Fujitsu Health Insurance Organization to educate employees on matters like the need for special health guidance to encourage greater use of the Specified Health Examination and Specified Health Guidance services (testing for metabolic syndrome) we introduced in FY 2008 to prevent lifestyle-related diseases. In addition, we provide health guidance in collaboration with Best Life Promotion Ltd., a Group company established in 2007 to strengthen health support for Fujitsu Group employees and their families.

Mental Health Services

Having appointed an in-house mental health counselor at an early stage, Fujitsu provides mental health counseling services to employees. In FY 2012, 10 counselors traveled to individual business sites to attend to the mental health care needs of employees. Self care has been enhanced through measures such as stress tests for all employees. Based on the stress test results, we also conduct organizational stress tests of each division, in an effort to support activities to improve work environments.

Adding to the above, we have created various opportunities for mental health education. Examples include mental health care in business lines, such as workplace management training for executive employees, and training for newly appointed executive employees, training for new recruits, and leadership training. Other activities include self care-based training programs.

On another front, the Fujitsu Health Insurance Organization offers physical and mental health phone counseling services provided by outside organizations to all covered employees.

Initiatives for Enhancing Work Engagement

The Fujitsu Group began in FY 2012 to use a stress test tool developed in-house to supplement traditional stress test questions with questions related to lifestyle and work engagement (realizing increases in vitality through work). The purpose of this tool is to provide data for analyzing issues for future health measures.

Advice on organizational stress tests was received from professors at the University of Tokyo, and, with feedback combining work engagement and stress test results, we worked with not only our industrial health staff but also our human resources organization to enhance work engagement and invigorate workplaces.

Stress diagnosis checksheet

Fujitsu Clinic

The Fujitsu Clinic was established as a medical clinic in 1944 on the premises of Fujitsu's Kawasaki Plant, for the purpose of providing medical treatment and health management services to employees and their families.

To answer the demand for community healthcare, the Fujitsu Clinic also provides medical treatment to local residents.

In recent years, Japan has seen a shift in the composition of diseases from acute to chronic diseases.

Accordingly, to help address the onset of lifestyle-related diseases, the Fujitsu Clinic has installed cutting-edge medical devices, such as CT and MRI equipment, capable of highly precise medical imaging. Through this measure, the Fujitsu Clinic has worked to enhance the prevention and early detection of lifestyle-related diseases, providing support for the earliest possible restoration of health.

Furthermore, the Fujitsu Health Management Center has been established adjacent to the Fujitsu Clinic as a health checkup facility for employees. The center conducts various health checkups for current and retired employees of Fujitsu Limited and the rest of the Fujitsu Group in the Keihin region (about 30,000 people a year).



Fujitsu Clinic

Human Resource Development

We consider the development of human resources and employee education as key management priorities, and are working to develop employees who can support a truly global ICT company.

Securing and Maintaining Excellent Human Resources

The Fujitsu Group has established its Company-wide Human Resources Strategy Committee, with members comprised of Corporate Executive Vice Presidents and higher-level management to discuss Fujitsu's human resources approach for implementing its vision and business strategies.

The committee considers issues concerning next-generation leaders and global human resource development, talent management, and training programs that are appropriate for changes in our business environment, and is open to the contributions of overseas human resources in its deliberations.

Selecting excellent human resources, having employees engage in action learning, and providing challenging assignments are the cornerstones of training. To make the uniform implementation of this approach possible at the global level, we are working to build global human resources foundation that provides a unified base for compensation systems that differ by country.

Fujitsu has adopted an evaluation system the aim of which is to enhance the expertise of individual employees and develop human resources capable of adapting to change. With this system, we perform two types of human resource evaluations. One is the Performance Evaluation, which helps employees rise to the challenge of achieving difficult goals. The other is the Competency Evaluation, which assesses individual employee success in attaining required capabilities and helps them build careers over the medium-to-long term. We have also created internal recruiting and FA systems that allow employees to choose their own career directions, and are intended to continuously boost employee motivation and achieve optimal human resource deployment.



Head of Corporate Affairs & Human Resource Unit
Akio Uekuri

Developing Global Business Leaders

The Fujitsu Group founded the Global Knowledge Institute (GKI) in 1999. GKI provides a system of programs to develop global leaders who ask "What is good for society?" in pursuing the common good. GKI programs put potential next-generation business leaders through intensive intellectual polishing. As of the end of FY 2012, training programs have been completed by a total of 918 potential future business leaders, including 335 from overseas. Summaries of two programs given in FY 2012 are given below.

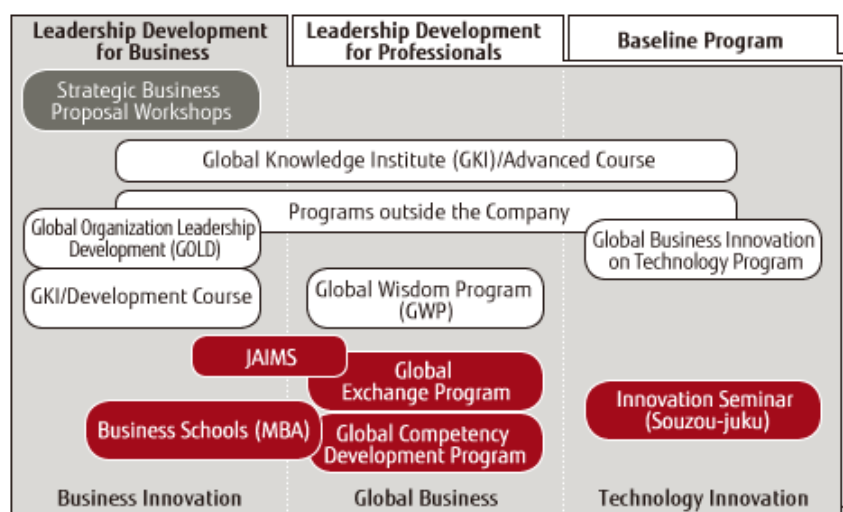
1. Promotion of diversity among next-generation leaders by strengthening ties with overseas business sites

In the program for developing future managers, the GKI/Advanced Course, the number of participants from overseas Group companies was increased. This raised the total number of class participants to the highest it has ever been and made it possible for future leaders from various backgrounds to engage in a discussion of "the common good and Fujitsu's role" from a wide array of perspectives. Furthermore, by enabling the networking future leaders across geographic boundaries, the program succeeded in forming a foundation from which Fujitsu can pursue the common good through its business activities.

2. Enhancement of the quality and scope of business leaders through continuous nurturing

The GKI/Development course, for which participants are selected from among young manager-class employees in Japan, aims to nurture leaders who will create new businesses and lead the transformation of business structures. In FY 2012, participants got hands-on experience in fields outside the ICT industries and conducted overseas studies focusing on the U.S. and Singapore. As a result, program participants were able to gain a real sense and understanding of the high-level concept of solving social and business issues through the power of ICT.

System of Leadership Development Programs



Developing Human Resources with a Global Viewpoint

One point of the Fujitsu Group's growth strategy is to accelerate the process of true globalization and to be a truly global ICT company. In order to develop global human resources who can carry out this strategy, we created a global business leader training program and the following training and human resource development systems.

1. Learning Language and Communication to Improve Literacy and Minds

Within Japan, we continue to work to improve our employees' language abilities, focusing on English. Our initial aim with new employees is for all of them to achieve a 600 TOEIC score. Employees not only study language intensively but also learn methods of language study that will lead to continuing improvement in ability through personal development. In addition to language skills, training that encourages employees to develop attitudes accepting of other cultures, and communication and management skills, are incorporated in the programs.

Furthermore, we offer support programs for foreign employees working in Japan, to improve their Japanese language capability and daily living. These programs support not only the employees themselves but also their supervisors and colleagues.

2. New Employees Become Global Human Resources through Experience

We operate a foreign rotation system (Global Exchange Program) for younger employees, which started in FY 2008. In this system, younger employees are sent overseas for a period of two to five years. In FY 2012, we also implemented our "Global Competency Development Program" targeted at younger employees in their twenties. This consists of three categories: global mindset, communication capability development, and short-term overseas experience. About 50 employees participated in this program.

In addition, as an initiative targeting young executives, we launched, in FY 2011, a "Global Practical Wisdom Leadership Development Program" for young managers in which participants learn global leadership from direct experience, interactions with other cultures, and actual models. In this program, we aim to actuate the ability to compete on the global stage through experiences that expand the participants' capacity. This program is based on three months of concentrated training and an 18-month apprenticeship model. In FY 2012, program participants, including employees from overseas, numbered 9 in all, the same number as in FY 2011.

In formulating the various measures used to develop global human resources, will remain cognizant of a broad range of job positions. These run the gamut from those held by people early in their careers to management positions, and consider Japanese staff assigned to overseas positions and people of foreign citizenship working in Japan. Furthermore, we consider a diversity of perspectives and approaches, such as links between Japan and locations overseas, and factors like formal education and experience.

Strengthening Baseline Training (Supporting Career Development with Links to the Chrysostom)

We have formulated a "Manager's Profile" that embodies our ideal for this class of employee and "Competency Grade Requirements" for general employees. The "Manager's Profile" and "Competency Grade Requirements" (introduced in FY 2011) underpin Fujitsu's current career advancement scheme, outlining both directions to work toward and the skills that should be acquired along the way. While keeping in mind their own career trajectory, employees can utilize the profile and requirements to guide their skill development efforts on a day-to-day basis. At the same time, Fujitsu is helping employees shape their careers by offering human resource programs that, as baseline training, are rooted in these HR systems.

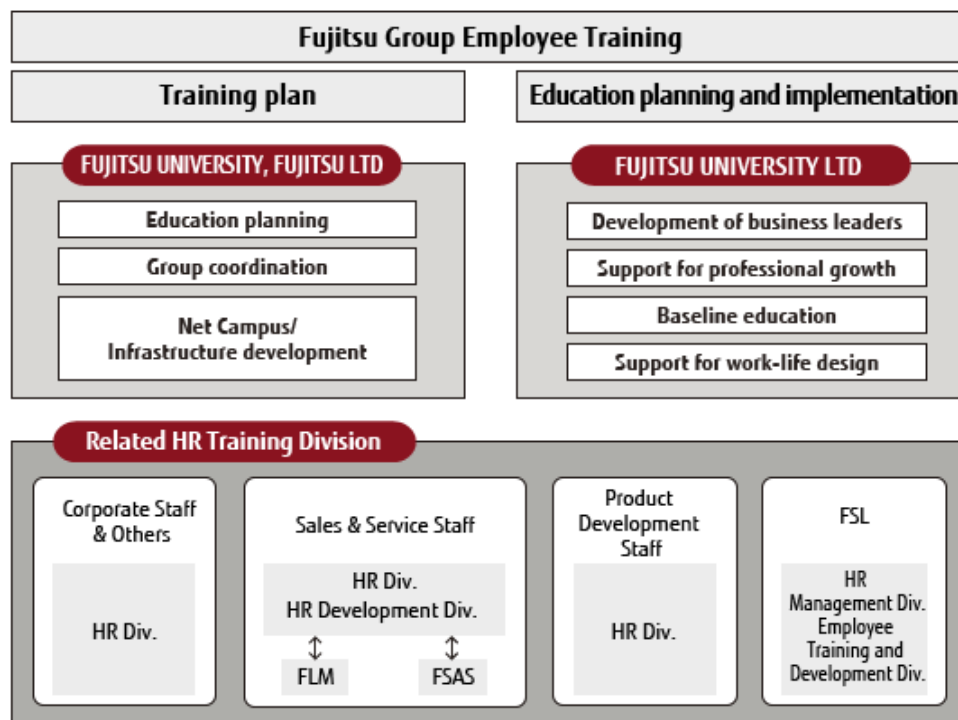
FUJITSU UNIVERSITY: An Institution for Human Resources Development

The Fujitsu Group, FUJITSU UNIVERSITY was established in 2002 to develop world-class human resources to lead the Fujitsu Group and our industry. To develop high-level human resources, FUJITSU UNIVERSITY has implemented systematic education programs based on the following four principles:

1. Develop business leaders who can exhibit global business leadership.
2. Strengthen the baseline (the values and skills) of our people so that they can understand our corporate vision and act based on those ideals.
3. Train professionals who are able to provide customers with a high degree of added value.
4. "Work and life design support" that supports a wide range of individual needs.

In the future, we will continue to coordinate proactively with universities, other external educational organizations, and NPOs that provide high-level ICT human-resource development to raise the Fujitsu Group's presence to even higher levels.

FUJITSU UNIVERSITY



*FLM stands for Fujitsu Learning Media Limited; FSAS, Fujitsu FSAS Inc.; and FSL, Fujitsu Semiconductor Limited.

Fujitsu NetCampus

This is an online education and training platform open to all of our approximately 170,000 employees in 201 Group companies in 28 countries around the world (as of March 2013). It provides applications / admissions for courses, study materials, testing, questionnaires and other functions. Unified e-learning, which is used to implement corporate policies throughout Fujitsu, is also implemented using this platform.

In FY 2012, we held five of these unified e-Learning courses in Japan and three overseas. In FY 2013, we plan to hold a variety of such courses on various themes in cooperation with head offices.

Promoting Training in Manufacturing

Fujitsu established the Fujitsu Academy of Industrial Technology, an internal vocational training school, within the Kawasaki Main Office in 1958 to focus on developing human resources to support manufacturing. The school moved to the Oyama Plant in 2007 and now conducts year-long group training that includes basic subjects and skills required by the Fujitsu Group. Training is based on Accredited Vocational Training carried out in accordance with the Human Resources Development Promotion Act.

Fujitsu, by having its own educational and training institution, is able to nurture the development of key production-floor operators capable of responding to rapid changes on the front lines of manufacturing. The 22 key personnel turned out in FY 2012 brought the total number of personnel who have completed training to 2775.

Efforts to expand this training are also underway as we strive to reinforce the front lines of manufacturing from an organizational standpoint. Here, we are devising a system of level-specific training that includes units for managers in charge of production sites.

FY 2012 Activity Topics

Programs for Young ManagersGKI / Development Course (GKI / D)

The GKI/Development course, for which participants are selected from among young manager-class employees in Japan, aims to nurture leaders who will create new businesses and lead the transformation of business structures.

In FY 2012, participants, in order to develop a clear understanding of what it means to be field- and customer- oriented, gained hands-on experience in agriculture, food service, and other non-ICT sectors in which they had no prior knowledge. Participants gained a real sense and understanding of the high-level concept of solving social and business challenges through the power of ICT, and then applied that experience in action learning.



Gaining hands-on experience in disaster recovery work at an oyster-culturing operation (Minamisanriku Town)



Experiencing first-hand the work of cultivating agricultural produce as a local revitalization program (Sakaki-machi, Nagano Prefecture)

Programs for Young Employees Global Competency Development Program (GCDP)

"GCDP" aims to help younger employees in their twenties develop their understanding of and ability to deal with different cultures, and enhance their ability to communicate in English. Having been launched in 2008, the sixth round of this program was held in the second half of FY 2012.

GCDP consisted of three modules. The first two, which aimed to develop a global mindset and the basis for communication capabilities with global application, were held in Japan. The third, an overseas field experience module, took place in the U.S. and India, where participants applied what they had learned in modules one and two, and gained experiences possible only by going overseas.



Visiting a local company (Tata Motors)



Exchange with local FC IPL staff (India)

New-Hire Training through a Disaster Support Program

In our FY 2012 training for new hires, we continued the program, begun in FY 2011, to provide assistance in areas struck by the Great East Japan Earthquake.

Focusing on the Tohoku Region, where the need for recovery assistance continues, we, with the cooperation of Kanagawa Saigai Volunteer Network, an NPO, had a total of around 300 of our new hires participate in assistance activities on nine occasions between September and November. On one such occasion, participants went to a coastal area of Iwate Prefecture, where they spent the first half of their time removing debris, started the second half helping with agricultural and fishing work, and ended with the latter.



Helping to harvest oysters in Rikuzentakata

Chapter III

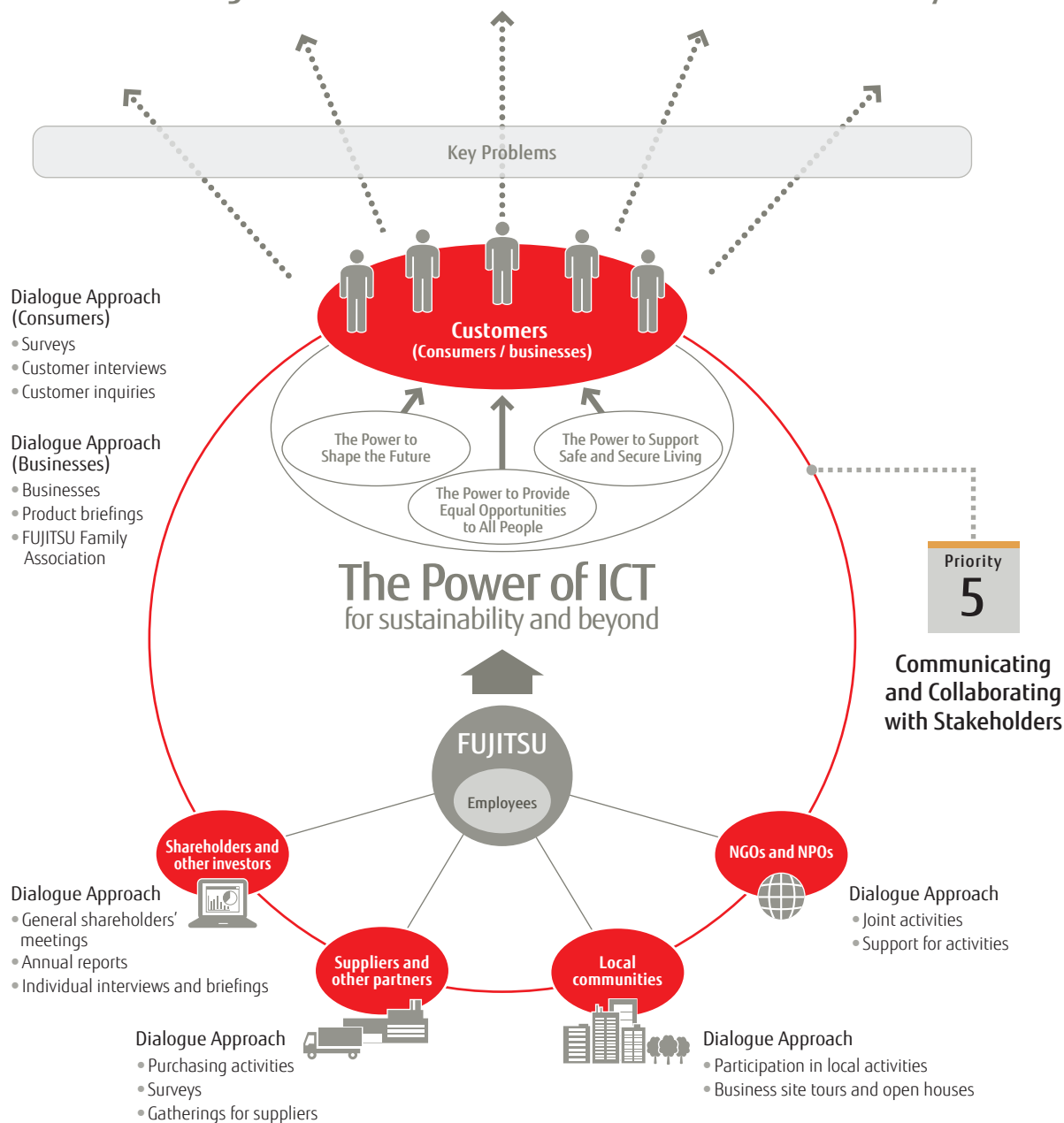
The Power of ICT
for sustainability and beyond

with Our Stakeholders

Communicating and Collaborating with Stakeholders



Contributing to Sustainable Futures for the Earth and Society



To Respond to the Faith and Expectations of Stakeholders

The Fujitsu Group treats dialogue and collaboration with stakeholders as one of its top priorities. In order to practice highly transparent management, the Fujitsu Group endeavors to properly disclose information to stakeholders and, in its efforts to build solid relationships on trust, creates communication tools and opportunities for dialogue. We also periodically conduct dialogues with external experts to

identify and consider the CSR issues the Fujitsu Group should be addressing. We listen to what people from various perspectives have to say about the Fujitsu Group and use what we learn to strengthen our CSR management. The Fujitsu Group, as a good corporate citizen, is committed to practicing CSR activities that respond to the various expectations and demands of our stakeholders.

Stakeholder Dialogue

We place great importance on interaction with diverse stakeholders as we conduct business

The Fujitsu Group always takes into account the bigger picture -the sustainability of society and the planet- when considering customer needs. The Fujitsu Group is committed to listening closely to feedback from various stakeholders, including customers, shareholders and other investors, business partners, and local communities, and to meeting their expectations. Through this process, we seek to continuously improve our corporate value.

Stakeholder Dialogue with Guest CSR Experts

The Fujitsu Group works to promote diversity and inclusion and develop human resources as means to strengthen the foundation for its CSR activities, and strives to be a company where employees can actively manifest their own added value. The essence of CSR is the incorporation of stakeholders' expectations into management and the evolution of the value that we deliver. In particular, as a corporate group that aims to achieve a human centric ICT society, we recognize the importance of fulfilling our CSR through the use of ICT in line with the global age.

In an "age without answers" that calls for adaptability in adapting to ever-quicken business cycles, we must find answers through dialogue. In the promotion of diversity and human resource development in particular, the world calls for a stance that does not merely apply laws and rules uniformly but also responds flexibly to societal conditions.

In fiscal 2012, we invited outside experts to several dialogue sessions that address these areas.



Session 1 Diversity and Human Resource Development

Discussion on diversity management and the inclusion of diversity that contributes to business.

Session 2 Diversity and Understanding of Human Rights

Discussion on the importance of top management and the necessity of reforming work styles.

Session 3 What are "People" in global ICT companies?

Discussion on the fusion of human rights and human resource management in digital society/global society.

Dialogue Participants



Tomoyuki Kaneko
Associate Professor
The University of Tokyo
Graduate School of Arts
and Sciences



Hiroki Sato
Professor
Interfaculty Initiative in
Information Studies
The University of Tokyo
Graduate School



Yayoi Masuda
Former Asia-Pacific
Head of Human
Resources for Nike, Inc.



Osamu Shiraishi
Director
Asia-Pacific Human
Rights Information Center



Sakie Tachibana Fukushima
President and Representative
Director
G&S Global Advisors Inc.



Jun Murai
Dean/Professor
Faculty of Environment
and Information Studies
Keio University

Key Comments from Experts (From Session 3, "What are 'People' in Global ICT Companies?")



Osamu Shiraishi
Director
Asia-Pacific Human Rights
Information Center

In order to carry out corporate social responsibility (CSR) as a global company, it is important to disseminate a philosophy of respect for human rights throughout the entire company. The first necessity is to learn about international human rights standards and, with top-level commitment, establish a corporate policy. At that time it is vital that the company introduce a due diligence process that enables the prevention and correction of human rights abuse. The company's sustainability and future prospects will be enhanced by its meeting these expectations of the international community.



Sakie Tachibana Fukushima
President & Representative
Director
G&S Global Advisors Inc.

When thinking about the diversity of human assets, it is important to view differences in nationality, ethnicity, gender, and other attributes as part of each person's individuality. Doing so enables appropriate placement of personnel without being swayed by nationality or gender. Support for activity by women, too, should be considered on the assumption of joint participation by men and women throughout society, rather than only from the viewpoint of providing support for women. I would like leaders acting on the global stage to act in "Gaijuu-naigou (gentle but firm)" manner, flexible outwardly with strong convictions inwardly.



Jun Murai
Dean/Professor
Faculty of Environment and
Information Studies
Keio University

Cyberspace is the first global space to appear on this earth that is free of national boundaries. The Internet has made it possible for anyone to be respected as an individual with a voice heard worldwide. The role of ICT is to connect individuals and communities online, making possible a range of actions that contribute to society.

I hope that global ICT companies like Fujitsu will advance the creation of a societal foundation for supporting the activities of multiple stakeholders through ICT, keeping contribution to the world foremost in mind.

- [Detailed discussion from Session 1 and Session 2](#)

The Last Word in Today's Dialogue



President and Representative
Director
Masami Yamamoto

Fujitsu aims to help realize a people-centric ICT society, and we listened with great interest to everyone's opinion on that topic from the perspective of "people." Because of ICT, the world is coming together at an accelerating rate and globally shared space is expanding. As for the related social responsibilities, it is not enough to simply think of them as cost/profit, convenience/risk, or any number of other trade-offs.

Today's dialogue strongly suggests that human wisdom will take on even greater importance in building CSR infrastructure, applying ICT on top of that, and balancing social value and economic value.



Corporate Senior Executive Vice
President and Representative
Director
Masami Fujita

The essence of globalization is the disappearance of barriers to peoples' ideas. The world will become increasingly diverse, and change to emphasize respect for individuals. Applying ICT, which has few physical limitations, and empowering people will be indispensable for realizing a sustainable society. For companies, "people" are assets and the foundation of all business activities.

As a global company, we would like to strengthen our CSR activities by continuing to hold dialogues with stakeholders and working together with them to search for solutions.

Other Stakeholder Dialogues held in FY 2012

Seminar on Universal Design and the Application of IT

We invited international experts participating in the DO-IT Program^{*1} to discuss what would be ideal in terms of universal design that applies ICT.

^{*1} DO-IT Program:

DO-IT is an acronym for Diversity, Opportunities, Internetworking and Technology. The DO-IT Program promotes the use of technology for supporting the independence, productivity, and greater social participation of people with disabilities.

- [Detailed content of the universal design dialogue](#)



Dialogue on Universal Design

Dialogue among BOP^{*2} and Inclusive Business Experts

We invited Asian Development Bank representatives and development consultants to discuss approaches for using ICT to solve social problems in developing countries and prospects for the development of BOP markets.

^{*2} BOP:

BOP is an acronym for Base of the Pyramid, which refers to the lowest segment of the world's income-earning population. The BOP population numbers some 4 billion.

- [Detailed content of the dialogue on BOP and inclusive business](#)



Dialogue on BOP and Inclusive Business

FY 2012 Stakeholder Dialogue (Session 1)

Session 1: "Diversity and Human Resource Development"

The Fujitsu Group makes "Contributing to the sustainable development of society and the planet" the basic policy of its CSR, and works to embrace diversity and develop human resources as means to strengthen the foundation for its activities, and strives to be a company where employees can actively manifest their own added value.

The essence of CSR is the incorporation of stakeholders' expectations and demands into management ahead of societal changes, and the evolution of the value we deliver. In an "age without answers" that calls for adaptability in adapting to ever-quicken business cycles, we must find answers through dialogue. In the promotion of diversity and human resource development in particular, the world calls for a stance that does not merely apply laws and rules uniformly but also responds flexibly to societal conditions.

We invited outside experts to several dialogue sessions that address these areas, in the hope of applying these experiences in the future reform of our management. The first session of this fiscal year, "Diversity and Human Resource Development," is summarized below.

Date held: January 10, 2013

Participants:

Experts

Hiroki Sato, Professor, Interfaculty Initiative in Information Studies, The University of Tokyo Graduate School

Tomoyuki Kaneko, Associate Professor, Graduate School of Arts and Sciences, The University of Tokyo (background attached)

Fujitsu

Masami Fujita, Corporate Senior Executive Vice President and Representative Director

Terumi Chikama, Chairman and President, Fujitsu University

Akio Uekuri, Head of Corporate Affairs and Human Resources Unit

Noriko Shiono, Vice President, Diversity Promotion Office

Sogo Fujisaki, Director, CSR Department

* The positions and titles of participants are as of the time of the dialogue.



Sato: In considering diversity management, it's important to distinguish between diversity itself and management by which diverse human resources can take action. A company must provide systems and mechanisms by which diverse human resources can take action. Within that, too, the company must clearly set forth its management philosophy. When diverse employees make judgments on matters, part of the process requires that each and every one determine whether a contribution can be made to achieving the company's management philosophy. When creating new businesses, each employee must consider whether each new business can contribute to society. Mechanisms by which employees with curiosity can come together to discuss solutions to issues are also necessary.



Hiroki Sato, Professor, The University of Tokyo

Fujita: Until now, such determinations had been made in binary fashion under company rules, but the scope expands with respect to vision. The choice becomes one of what is closer to the corporate philosophy, or in other words, what makes a contribution to society, which makes me feel the need for a shared sense of value. Even if people have diverse ways of thinking, their goals must be aligned. At present we have a strong perspective on resolving users' problems, but thinking ahead from the perspective of Fujitsu's CSR, we need to turn our eyes to what's even further ahead, the resolution of societal issues.



Masami Fujita, Corporate Senior Executive Vice President

Kaneko: Speaking from the field of machine learning that I specialize in, computer shogi now requires the ability to learn knowledge, based on tens of thousands of moves by professional shogi players, that can be applied to a vast range of positions said to number 10 to the 70th power. Compared with pattern recognition learning that has clear correct answers, shogi reveals the individuality of the players. With this as the background, rather than having the computer memorize rote data, we will have it learn through minor program modifications while inferring the judgments behind moves.

At the University of Tokyo College of Arts and Sciences where a course on information is compulsory, liberal arts students sometimes ask why this course is required in the arts and sciences. I explain that the purpose is to learn the thinking behind things and to learn the ability to perform trial and error. I think that the thinking behind human resource development in companies is something similar.



Tomoyuki Kaneko, Associate Professor, The University of Tokyo

Chikama: In an age of great change, required skills also change constantly and become more complex, making adaptability a must. As the speed of conventional learning can't keep up with the speed of change, it may be best to acquire the ability to decide what things must be done, or acquire a sort of mold which gives rise to learning and innovation. In that sense, I think it's becoming more and more important to adapt to this age of great change by training basic human abilities such as that of understanding what other people value or that of building human relationships. I want to use ICT from here out to continue empowering people to free themselves from routine tasks and to create work with value.



Terumi Chikama, Chairman and President, Fujitsu University

Sato: Speaking of work styles that make use of ICT, we've arrived at an age in which we can work regardless of location. However, this creates control-related problems such as those involving labor laws or security, and how to balance internal rules and technological possibilities is now an issue. Companies in Japan are strict with regard to management of internal information, and telecommuting is not becoming widespread. I think companies should clearly separate corporate and individual responsibilities, allow a bit more individual responsibility, and prepare environments allowing employees to work freely. As the use of ICT enables a variety of working styles, the dividing line between corporate and individual responsibilities is going to become extremely important.

Uekuri: As workplaces diversify and people holding a variety of ideas increase, it has become difficult to satisfy all employees with a single system. When the opinions or ideas of bosses and subordinates differ, agreeability can be heightened by engaging in sufficient communication in the workplace. I want to explore ways of work that are bound by vision and philosophy, not only by systems and mechanisms.



Akio Uekuri, Head of Corporate Affairs and Human Resources Unit

Shiono: At Fujitsu, we carry out our activities with three objectives: the creation of workplaces where every employee can work with energy, the creation of new values, and harmonious relationship with society. I hope to connect the ideas gained in this dialogue with future actions in carrying out Fujitsu's diversity activities.



Noriko Shiono, Vice President , Diversity Promotion Office

Kaneko: In computer shogi a majority decision is used when opinions diverge, but if we dig deeper into the sharing of value judgments or development, artificial intelligence may further evolve to free us from routine labor. In the way that how you use Google search affects the efficiency of work, lifestyles and work will change through ICT. From the standpoint of providing products and services, we need to clearly convey to society what sort of society we are trying to create.

Fujisaki: Amid an "age without answers," it's important when we need to find an answer that we consider solutions through dialogue. These dialogues call for diverse opinions and a spirit of finding rapport with those, as well as curiosity and enthusiasm. The use of ITC is creating means of supporting communication with people of all sorts, including disabled people and people of foreign nationality.



Sogo Fujisaki, Director, CSR Department

Fujita: Binary judgment calls have been fine for top management until now. However, when applying business judgment from here out amid ambiguity, it seems to me that words and ways of explaining that are backed by basic education and persuasion skills are important in bringing agreeability to the judgments.

This dialogue session touched upon many points that compel us to consider, such as how vision becomes all the more important as diversity increases, and the nature of humane work styles amid the evolution of artificial intelligence. I would like to incorporate these suggestions into our ongoing CSR activities.

Participant profiles



Hiroki Sato, Professor, Interfaculty Initiative in Information Studies, The University of Tokyo Graduate School

1981: Hitotsubashi University Graduate School of Social Sciences; withdrew from Ph.D. program with credits.

1981: Researcher at the National Institute of Employment and Vocational Research (currently the Japan Institute for Labour Policy and Training).

1983: Assistant Professor, The Ohara Institute for Social Research, Hosei University.

1991: Professor, Faculty of Business Administration, Hosei University.

1996: Professor, Institute of Social Sciences, The University of Tokyo.

2011: Current position.

Specialty in human resource management. Member of the Council for Gender Equality, Work Life Balance Promotion Public-Private Top Conference, etc.



Tomoyuki Kaneko, Associate Professor, Graduate School of Arts and Sciences, The University of Tokyo

Associate Professor, Department of General Systems Studies, Graduate School of Arts and Sciences, The University of Tokyo.

March 2002: Completed Ph.D. program at the Graduate School of Arts and Sciences, The University of Tokyo.

April 2012: Current position.

Engaged in search technology research that effectively leverages computational ability enabling artificial intelligence to exceed human ability, centered on game programming and machine learning using shogi, igo, and other cognitive games. Also engaged in research into application of science and means of communication for supporting human decision-making.

FY 2012 Stakeholder Dialogue (Session 2)

Session 2: "Diversity and Human Rights"

With the goal of achieving management that values people, the Fujitsu Group is continuing its stakeholder dialogue. Following on Session 1 of the dialogues (see URL below for an overview), Session 2 focused on "Diversity and Human Rights" as its theme. An overview is presented below.

[CSR Policy](#)

[Stakeholder Dialogue, Session 1 \(January 10\)](#)

Date held: February 27, 2013

Participants:

Experts

Osamu Shiraishi, Director, Asia-Pacific Human Rights Information Center

Yayoi Masuda, Former Asia-Pacific Head of Human Resources for Nike, Inc. (background attached)

Fujitsu

Masami Fujita, Corporate Senior Executive Vice President and Representative Director

Hiroyasu Takeda, Corporate Vice President and Head of Purchasing Unit

Yoshiki Kondo, Corporate Vice President and President, Business Management Operations Group

Akio Uekuri, Head of Corporate Affairs & Human Resources Unit

Makoto Kouno, Vice President, Public Policy and Business Development Office

Noriko Shiono, Vice President, Diversity Promotion Office

Satoshi Ogiso, Manager, HR, Corporate Functions

Sogo Fujisaki, Director, CSR Department

* The positions and titles of participants are as of the time of the dialogue.



Fujita: On the topic of human rights and diversity, it seems to me that we are prepared in terms of systems and operations, but not in terms of firmly establishing these. With respect to human rights, too, the response in Japan is progressing, including in the area of buraku discrimination. Overseas, however, we recognize the ongoing issue of whether we can equip ourselves with the wisdom to act at the global level, such as in our business expansion in emerging countries.



Masami Fujita, Corporate Senior Executive Vice President and Representative Director

Shiraishi: What's important for companies is an understanding of not only discrimination and harassment but also international human rights issues. Human rights tend to be understood in terms of caring about each other, but this is a mistake; the root issues of human rights lie where morals or caring would not work at all, as seen in a dictator's abuse of authority. The three steps in human rights education are 1) understanding human rights at the international level; 2) acquiring the skills to protect human rights; and 3) nurturing an attitude of respect for human rights.



Osamu Shiraishi, Director, Asia-Pacific Human Rights Information Center

Takeda: In 2009, Fujitsu made a Siemens' computer division a wholly-owned subsidiary, thus establishing a global procurement organization with Germans and Japanese working together. The staff is about 200 people with a multi-ethnic makeup that consists of 40% Japanese, 40% Germans, and 20% Chinese, South Korean, and Taiwanese. We hope to incorporate the good points of their respective cultures into our work.



Hiroyasu Takeda, Corporate Vice President and Head of Purchasing Unit

Kondo: I'm in charge of the Solution Business Management Unit that supervises Fujitsu's sales and SE business management divisions, and of Fujitsu IS Service (FISS), which was established in February. It's a company with a unique employment composition, in which nearly 90% of the 700 employees are women and 200 are temporary staff. One of my missions as the President of this company is creating flexible work systems matched to women's work styles, and making the company an advanced model for diversity within the Fujitsu Group.



Yoshiaki Kondo, Corporate Vice President and President, Business Management Operations Group

Masuda: Diversity consists of attribute data seen from the outside, such as ethnicity, gender, age, and so on, expressed in terms of "who I am." However, what's important for the organization is the inclusion expressed in terms of "how I feel." Motivation increases when individuals feel they have a place in the workplace, with results seen in actions such as taking ownership and making active suggestions for improvement.



Yayoi Masuda

Fujisaki: Society and companies in Japan maintain an almost homogenous state, which makes for an environment without much of a feel of diversity. It's also an environment in which it's difficult to get a direct feeling for global human rights issues such as child labor or forced labor. What should Japanese companies do in order to address global human rights issues?

Shiraishi: It's important for companies to give serious thought to the matter of protecting human rights. Toward that end, (1) it is important that top management, together with relevant departments, decide on a policy of promoting human rights, and that this policy be disseminated throughout the company. (2) Next, the company should introduce "human rights due diligence," or mechanisms to check where human rights risks may lie within the company. (3) Finally, in the event that abuse of human rights occurs, the company should immediately make inquiry to the victims of the abuse and eliminate the abusive situation.

Masuda: I think there are two relevant approaches: that of directly addressing human rights and diversity, and that of addressing performance management. Of the two, I think the performance management approach yields faster results by far. Transparency and consistency are the key points for successful evaluation systems and performance management. The personnel division should indicate the basis for its evaluations (transparency) and should conduct thorough training of the management ranks, so that personal factors do not impact evaluations and promotions (consistency).

Uekuri: From what Mr. Shiraishi has said, it seems to me that executing human rights due diligence and operating the PDCA cycle are important. Moreover, with regard to evaluation systems and performance management, which are always key topics for us, in my future actions I hope to refer to what Ms. Masuda said about "transparency" and "consistency" while adding my own point regarding "agreeability."



Akio Uekuri, Head of Corporate Affairs & Human Resources Unit

Kouno: I think that overcoming diversity issues is possible when the standards for performance management are clear. I want to set clear performance standards and, by thoroughly sharing these within the company, establish fair standards. I also realize that these standards are what ensure diversity.



Makoto Kouno, Vice President, Public Policy and Business Development Office

Shiraishi: In my opinion, one of the most pressing issues facing Japanese companies is that of work styles. I think that one of the things that make it difficult to provide environments for work by women is the matter of men demanding that women work in the style of men. We need to consider agreeable work styles by which women can work normally, through means such as cooperation from men in lessening the load on women. European companies have already been achieving this while maintaining high international competitiveness.

Kondo: I hope to put what I've heard here today into use in management from here out. More specifically, I hope to leverage the advantages of FISS having been spun off from Fujitsu, introduce systems and mechanisms that bring variation to work styles for women, and create an organization where every employee feels he or she has a place and will want to contribute actively to the company.

Takeda: Working with Germans, every day I experience issues of inefficiency. Working with diligence is something we could point to as a good point of Japan's culture, but it also runs contrary to working with efficiency. However, if we cannot achieve both of these, we cannot move ahead as a global company. I hope to continue tackling the matter of improving work styles.

Fujita: In this discussion, I've been very motivated by what the two experts have said. I learned that although we conduct our diversity promotion activities with an awareness of diversity and inclusion, before we can unify our terminology and people's sense of value, we should think of inclusion in terms of whether people feel they have a place in the workplace. This has also been a good opportunity to deepen my understanding of the concepts of respect for human rights that are at the foundation of inclusion, and to consider how management should value people.

Participant profiles



Osamu Shiraishi, Director, Asia-Pacific Human Rights Information Center (Hurights Osaka)

The University of Tokyo Faculty of Law (LL.B.), The University of Tokyo Graduate Schools for Law and Politics (LL.M.), completion of Ph.D. program. University of Virginia School of Law (Master of Comparative Law).

April 1980: Employed at the Headquarters (Geneva) of the Office of the UN High Commissioner for Human Rights (UNHCR).

October 1982 - August 2005: Assigned to the Division of Human Rights, United Nations Secretariat (Geneva Office).

August 2005: Compulsory retirement from United Nations.

May 2006 - present: Director, Asia-Pacific Human Rights Information Center (Hurights Osaka). Visiting Professor, Ryukoku University (until March 2010). Invited by Fujitsu as lecturer at FY 2011 top management training sessions on human rights education.



Yayoi Masuda, Former Asia-Pacific Head of Human Resources for Nike, Inc.

Experienced a range of business fields at Ricoh Company, Ltd., including joint venture operation.

Subsequently entered Levi Strauss & Co.; contributed to the company's globalization as Global Leadership Development Director at the US headquarters and other regions worldwide. From 2004, led organizational personnel overall for 4 years at the US headquarters of Nike, Inc. as the Asia Pacific Head of Human Resources.

Ms. Masuda is a leader with her own global perspective as well as an expert in global organizations and global leader development, with a focus on the global penetration and improvement of corporate values. She is the co-author of *Leader as being oneself* (Kobunsha Co., Ltd.) with Professor Toshihiro Kanai of Kobe University.

FY 2012 Stakeholder Dialogue (Universal Design)

Lunch meeting with guest experts on universal design (UD)

The Fujitsu Group is not only developing and offering products and services that are easy to use by all and enable participation in society by more people, but is also devising work styles that enable a variety of people to work within the company.

On October 5, the Universal Design and IT Usage Seminar was held at Fujitsu Trusted Cloud Square. Fujitsu took this opportunity to welcome Dr. Sheryl Burgstahler (founder of the DO-IT Center, University of Washington) and Professor Kenryu Nakamura of The University of Tokyo, the co-host of the seminar, for a lunch meeting with the company's top management on the theme of UD. An overview of the dialogue follows.

Participants:

Experts

Sheryl Burgstahler, Professor, University of Washington

Kenryu Nakamura, Director, DO-IT Japan; Professor, The University of Tokyo

Fujitsu

Noriko Shiono, Vice President, Diversity Promotion Office

Ken Toyoda, Director, Recruiting Center

Kazuhisa Terashi, Head of Ubiquitous Services Business Unit

Kimitaka Kato, SVP, Marketing Transformation Project Office

Yoshihiro Ueda, President, Fujitsu Design Limited

Sogo Fujisaki, Director, CSR Department (meeting MC)

* The positions and titles of participants are as of the time of the dialogue.



Fujisaki: First, I would like to thank you all for coming today. On the topics of UD and ICT, I think there are two issues at work: empowerment^{*1} and communication. Empowerment can also be seen as two items, with the first involves individuals taking action in society thanks to empowerment by products and services. The other involves a greater number of people taking action thanks to the empowerment of employees. With regard to communication, it is important for people with disabilities and companies to advocate their respective situations and to strengthen their mutual communication. Along those two lines, I would like to hear any advice or expectations you have for companies.

^{*1} Empowerment: The act of expanding persons' on-site discretionary power and promoting their autonomous decision-making while supporting their actions. Empowerment allows people to display their latent talents and improve their individual capabilities.



Sogo Fujisaki, Director, CSR Department

Terashi: At Fujitsu, we not only develop devices such as PCs and smartphones but also embed sensors in these and provide services that tie data to cloud services. On the topic of product development empowerment, we're working to widen the scope of our business by widening our thinking to encompass devices that grant users the ability to do what they want. From the standpoint of a manufacturer, we're currently supporting the Wish Project, which uses ICT to offer children in a high school for physically disabled students and children with learning disabilities in Kagawa Prefecture the ability to do what they want. Although different people face different situations and circumstances, we hope to provide what support we can through ICT to help them live lifestyles with joy.



Kazuhisa Terashi, Head of Ubiquitous Services Business Unit

Prof. Burgstahler: It's a good thing to set regular opportunities to communicate with users with disabilities. In particular, companies developing products should gather the opinions of users themselves before shipping to the market, as Microsoft does. The matter of how to incorporate the opinions of people with disabilities into critical points of product development is an important one.



Sheryl Burgstahler, Professor, University of Washington

Ueda: In my own talk earlier, I said that UD will shift from the creation of products, architecture, and services that anyone can use to the provision of services using interfaces optimized for each individual. Taking in what Prof. Burgstahler said, I believe it's more fitting to use the term "add to" instead of "shift from." Looking at our UD activities from here out, I think we need to move ahead with both design of ICT products that anyone can easily use, and design activities that aim to provide services through user interfaces optimized for each individual.



Yoshihiro Ueda, President, Fujitsu Design Limited

Kato: From this fiscal year, Fujitsu has moved the designing department's brand and UD team to the marketing department within the corporate headquarters, and is undertaking design development activities along company-wide lines. We intend to engage in global support for UD in the form of technological development and activities that leverage customers' voices. At the same time we'll communicate with society and citizens through new UD activities that include industry, government, academia, and citizens, with today's lecture and workshop as examples.



Kimitaka Kato, SVP, Marketing Transformation Project Office

Prof. Burgstahler: I think it should be possible to create a model by which a company recruits an appropriate group of people who periodically test and evaluate a variety of products. It's important that high school students and other young people with varied disabilities perform evaluations from the perspective of those varied disabilities.

Nakamura: UD in Japan is meticulous and thus overly protective, and needs to shift in the direction of enabling autonomy as in the US. Product design geared toward Japan's future is necessary, with consideration of educational systems and other cultural differences.

Shiono: The Fujitsu Group is advancing diversity in the belief that it's vital to leverage diverse human resources in order for the company and individuals to grow together. Internal surveys have shown a difference between people with and without disabilities in the affirmative response rate to items such as "a sense of fulfillment toward your job." We've had people with disabilities comment, "I have to clearly convey what I want the company to consider, and what things I can and can't do." I want to use a variety of measures to aim for workplaces where diverse employees are motivated to work with enthusiasm.



Noriko Shiono, Vice President, Diversity Promotion Office

Toyoda: At Fujitsu, employees with disabilities are active as salespersons, SE, developers, researchers, business staff, and so on in all of our businesses. Through working alongside people with disabilities in our workplaces, Fujitsu has learned many important requirements for business. I always tell students with disabilities who seek employment at Fujitsu that the company gives consideration to disabilities, but does not hold back in asking people with disabilities to contribute. We confirm what considerations are required for each person we employ, consider what workplaces will let that person be active, and undertake coordination that includes putting in support devices.



Ken Toyoda, Director, Recruiting Center

Prof. Burgstahler: The reason I have DO-IT programs engage people from their teens in the US is because I believe this is a most vital age. Teens are starting to develop self-awareness, and tend to think that every problem that occurs is because of their disabilities. They all have their own problems and concerns, but by sharing these, friendships grow within DO-IT. As an example, there is an event for graduating students in the US known as prom, where girls are generally escorted by boys. In the past, girls with disabilities have stayed away, blaming it on their disabilities, but girls taking part in DO-IT have taken part as a girl group. It's important to know what people are facing at every age, and determine what their needs and worries are at that time.

Nakamura: Japan needs to start thinking about the impact of raising children in a world that is kind to disabled people and the elderly. It's not meaningful to simply listen to the voices of these people who are communicating and creating lives inside a closed society. We've come to an age in which we can observe them, build people up with technology, and design society together with people.



Kenryu Nakamura, Director, DO-IT Japan; Professor, the University of Tokyo

Terashi: Being too kind may stem from holding back in what we ask of people. It seems to me that we can hold back too much when we don't stand in people's place. In the Wish Project, too, we start from asking what children are thinking, without feeling sorry for them or feeling we have to do something for them. Using SNS and other tools, we need to create a place where they can share their thoughts. I think it all begins with people in varied circumstances around the world understanding each other's thoughts and worries.

Fujisaki: The essence of Fujitsu's business is providing solutions through ICT, which in turn is a service that resolves society's issues while providing quality products. To identify society's issues, too, I want to think about how to overcome cultural differences and provide value to society.

The power of ICT lies in unleashing the abilities of individuals and bringing opportunity and possibilities to all people. The Fujitsu Group's UD initiatives bear a large role in this. We hope to draw on the opinions expressed to keep on improving our corporate value.

Participant profiles



Sheryl Burgstahler

Affiliate Professor, College of Education, University of Washington (Seattle, Washington).

Founder and Director, DO-IT Center and UW Access Technology Center (ATC); Instructor/Advisor, Distance Learning.

Engaged in project development, support, and instruction for IT usage, UD application, physical space provision, and other activities to resolve issues for students facing academic or vocational difficulties due to disabilities or illness.



Kenryu Nakamura

Director, DO-IT Japan; Professor, The University of Tokyo

1987: Assistant Professor, Faculty of Education, Kagawa University.

1992: Visiting Scholar, University of Kansas and University of Wisconsin-Madison.

1995: Visiting Scholar, University of Dundee.

April 2005: Project Professor, Research Center for Advanced Science and Technology, The University of Tokyo.

FY 2012 Stakeholder Dialogue (BOP, Inclusive Business)

Discussion with guest experts on BOP and inclusive business

The Internet is creating new opportunities for its 2.4 billion users worldwide. However, these opportunities can be lost amid information disparities (digital divide) in developing countries where ICT infrastructure is inadequate.

The Fujitsu Group has declared its intent to take on the challenge of changing society by 2020 through the "Three Powers of ICT." With regard to one of these, "The Power to Provide Equal Opportunities to All People," the Fujitsu Group is undertaking partnership development and field surveys aimed at developing countries. To help put this into concrete practice, Fujitsu invited global experts to a discussion on the theme of "Cultivating the BOP market (Prospects for the Future)." An overview of the discussion follows.

Date held: February 27, 2013

Participants:

Experts

Armin Bauer, Senior Economist, Asian Development Bank

Robert de Jongh, CEO, Red Mantra Group

Fujitsu

Kanji Hayashi, Head of NTT Data Global Business Unit

Mikito Kiname, Executive Vice President, Marketing Unit

Yoshihiko Tokumaru, Corporate Senior Vice President, Fujitsu Research Institute

Takafumi Ikuta, Senior Research Fellow, Economic Research Center, Fujitsu Research Institute (secretariat)

Sogo Fujisaki, Director, CSR Department (secretariat)

* The positions and titles of participants are as of the time of the dialogue.



Key comments by the participating experts are as follows.

Key comments by experts



Dr. Armin Bauer

When conducting business in the BOP market, a company should not only make efforts to sell ICT systems and devices but should also consider who will use the provided goods and services and for what purpose, as well as how this will benefit society. Most Japanese companies, including Fujitsu, tend to focus only on the top tier (top-level companies and the government) as clients. ICT has the power to resolve many of the problems of developing countries. I think that adding "for BOP" to the end of Fujitsu's declaration of "The Power of ICT" can reform the company's conventional thinking about business.



Robert de Jongh

To use ICT in resolving the social issues of developing countries, the presence of partners (governments, NGOs, etc.) well versed in the local issues is important. Even if the return on a project is minimal at the time of launch, a high degree of social contribution will lead to an improvement in reputation and return for the company in the long run.

When entering business in developing countries, it's vital to take the approach of not only committing low-cost products to the BOP market but also providing systems that comprehensively resolve social issues.

The Fujitsu Group, drawing on the expectations and requests of outside experts, will make efforts to create mechanisms that promote the diffusion of ICT so that as many people as possible worldwide can open the door to cyber society and enjoy the benefits of ICT.

Participant profiles

Armin Bauer

Armin Bauer is a Principal Economist at the Asian Development Bank (ADB). Mr. Bauer has been with ADB since 1995 in various functions in the operational, strategy and policy, and knowledge management departments. One of Mr. Bauer's recent initiatives is a collaboration with ADB's Private Sector Department and the Inter-American Development Bank (IDB) on promoting inclusive business investments in various Asian countries. The initiative comprises (a) market scoping studies in 10 Asian countries on inclusive business at the base of the pyramid, (b) the development of an inclusive business impact assessment tool, and (c) the possible establishment of investment facilities for inclusive business in cooperation with development partners. Mr. Bauer has more than 20 years of development experience, a Ph.D. in development economics, an M.A. in Political Economy (1987), and a BA in Administrative Science.

Robert de Jongh

W. Robert de Jongh is currently the Founder, CEO and Chief Inclusion Architect at the Red Mantra Group, a boutique strategy consulting, market research, and ideation company focused on inclusive growth, sustainability and accountability in emerging markets worldwide. He is currently Regional Team Leader and Inclusive Business Development specialist at the Asian Development Bank, where he currently manages a portfolio of inclusive business and impact investing initiatives including fund design, market feasibility studies, and a strategic knowledge exchange with the Inter-American Development Bank. Mr. de Jongh is also leading an inclusive business^{*} development and engagement strategy for the poorest regions in the United States for the Ford Foundation. Mr. de Jongh is a graduate of the American University in International Studies and Development Economics in Washington, D.C. and completed EU policy studies at the Universite Libre de Bruxelles in Brussels, Belgium.

* Inclusive Business

-Inclusive business is a sustainable business model that targets poor and low-income people ("base of the pyramid," BOP) in emerging and developing countries, resolving regional social issues while securing revenue for companies.

-Inclusive business seeks to create a value chain by viewing the poor not only as consumers but also as suppliers, sellers, and laborers. It has gained attention as an approach for cultivating growth markets in emerging and developing countries such as African countries and India.

With Our Customers

We adopt a customer-centric approach to our thinking and actions, and communicate proactively with our customers so that we can grow together as their partner.

To Increase Customer Satisfaction

Fast-changing social and economic environments make this a difficult time in which to see far ahead, so we place ourselves in the position of the customer and transform ourselves in order to better and more rapidly understand new requirements, and innovate to meet those needs as quickly and accurately as possible. We are aiming for management innovation by using the "Program to Improve the Quality of Management^{*1}", and taking a number of initiatives to form an innovative corporate culture that can keep pace with customer changes.

^{*1} Program to Improve the Quality of Management:

A framework for customer-centric management excellence modeled on the Malcolm Baldrige National Quality Award of the United States, the de facto global standard for management innovation.

Promoting Field Innovation with the Customer

The Fujitsu Group initiated "Field Innovation" in 2007 to create a prosperous future along with our customers.

It is important to get back to the starting point, where ICT is seen as a tool to support people in their work and increase efficiency in their working places. Field Innovators, who are specialists in Field Innovation, concentrate on the customer's workplace to determine the true nature of the issues present by visualizing relationships between people, processes, and ICT. This increases the value of using ICT by making full use of actual insights from the workplace.

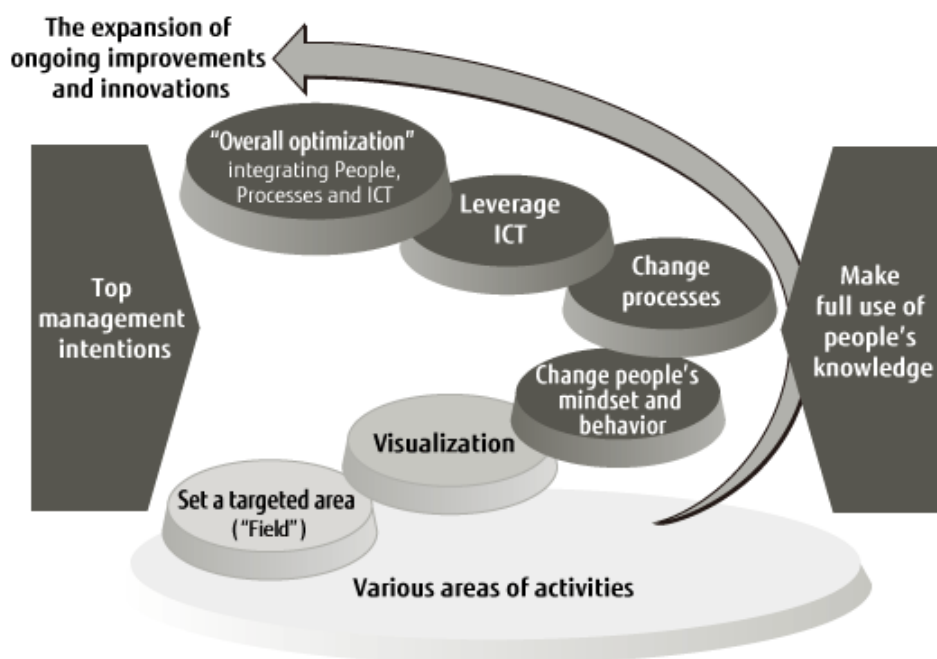
By making such management issues visible, Field Innovation leads to ongoing management innovation by customers in line with top management's intentions. We have already implemented Field Innovation programs at as many as 500 customers and also continue to use it ourselves within the Fujitsu Group.

Now, 350 Field Innovators work with customers to visualize the issues and build consensus at customer worksites to promote innovation. We continue to foster Field Innovators in a bid to strengthen the framework and concentrate their knowledge.

Fujitsu accumulates practical wisdom as the knowledge gained through Field Innovation, which it then uses to increase the quality of activities and provide further value using ICT.

Results of Field Innovation Activity (Including Fujitsu Group internal projects) (Units: Activity)

	FY2008	FY2009	FY2010	FY2011	FY2012
Results of Activity	129	294	331	336	522



The Field Innovation Process

We insist on rendering all the facts visible

By selecting areas for improvement and innovation as fields, and by using the latest techniques (such as business fieldwork^{*2}) and technologies (such as BPM-A^{*3}), we are taking a proactive approach to making facts visible.

*2 Business fieldwork:

A site survey method in business based on ethnography, a social scientific research and analysis methodology for identifying and visualizing facts. In business, this method is used primarily for observation and innovation at customer sites.

*3 BPM-A (Interstage Business Process Manager Analytics):

A business process observation/analysis tool developed by Fujitsu that can help grasp bottlenecks and other operational process issues and facilitate process innovation.

Facts modify attitudes and actions

Issues only become clear when the basic facts are known, after which mindsets can be reformed. We aim to establish an agreement on mindset among people through facilitation^{*4} and workshops, and achieve reforms by taking advantage of people's knowledge. The changes in people's mindset and actions will affect the processes in which we utilize ICT. Our innovation methodology is threefold - in People, Processes and ICT - through which we advance reforms.

*4 Facilitation:

A set of techniques that is used to elicit fully satisfied consensus in a meeting by encouraging members to participate in the discussion and by controlling the flow of communication, even if the meeting deals with touchy subjects.

Ongoing innovation brings an innovative mindset to businesses and organizations

By continuing our innovation methodology in line with customers' top management intentions, we aim to establish powerful companies and organizations that will themselves continue to innovate. We also sponsor an "FI Community" to research the keys to promoting innovation by drawing together customers who have experienced Field Innovation for themselves.

Fujitsu Trusted Cloud Square

Fujitsu Trusted Cloud Square^{*5} was opened in Tokyo's Minato Ward in 2010 as a place for Fujitsu customers to actually experience our technologies, products, and services in the cloud computing age.

This facility provides permanent exhibits of the cutting-edge technologies, products, and solutions that make the dreams of mankind real, with everything from supercomputers to the latest smart devices on display. Visitors can take part in seminars and demonstrations centered on major themes in the ICT field such as cloud computing and big data, and ITC system verification. Through these activities, they can also experience for themselves the Fujitsu of today and the advanced technological capability that makes it all possible.

In FY 2012, we had about 11,000 visitors to the Fujitsu Trusted Cloud Square, for a cumulative total to date of around 36,000 visitors.

^{*5} Fujitsu Trusted Cloud Square: A facility usable by reservation by our corporate and institutional clients.

- [Fujitsu Trusted Cloud Square](#)



Supercomputers
Visitors can learn about the fields where supercomputers are used and experience the HPC solutions made possible by the "K computer"



Server room
Approx. 300 server and storage units onsite are used to test and demonstrate customer ICT systems

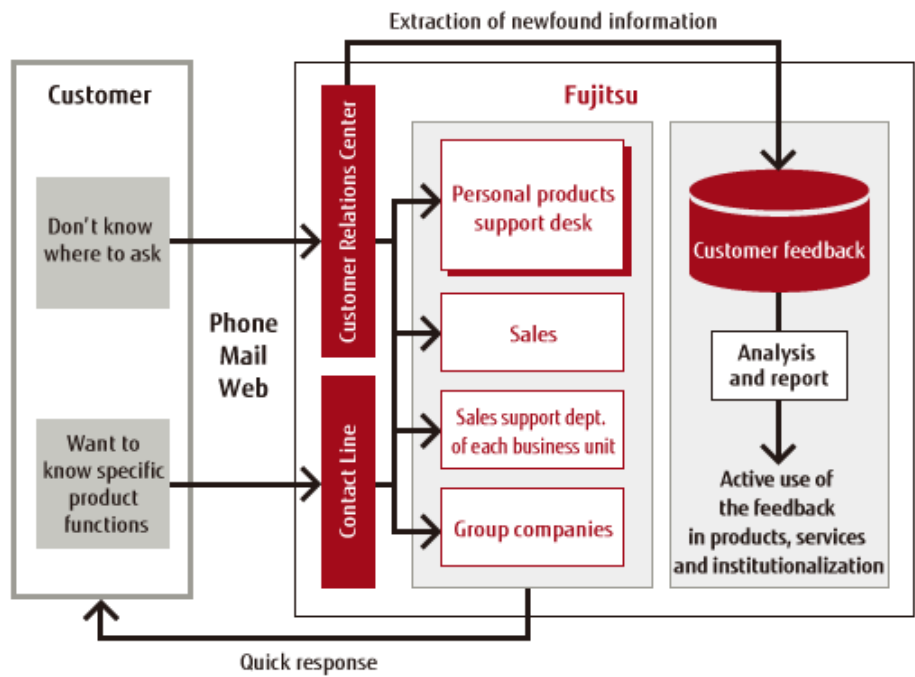
Operation of the Fujitsu Customer Relations Center and the Fujitsu Contact Line

We established the Fujitsu Customer Relations Center in 2003 to handle inquiries and other problems concerning products and services from customers who are not sure where to address their issues. Also, in order to respond quickly to customers concerning the functions and prices of products before they make their purchases, since 2005 we have been routing all such pre-purchase telephone inquiries to a single window, the Fujitsu Contact Line, with the telephone number for access published on our corporate website and in catalogs, press releases and advertisements.

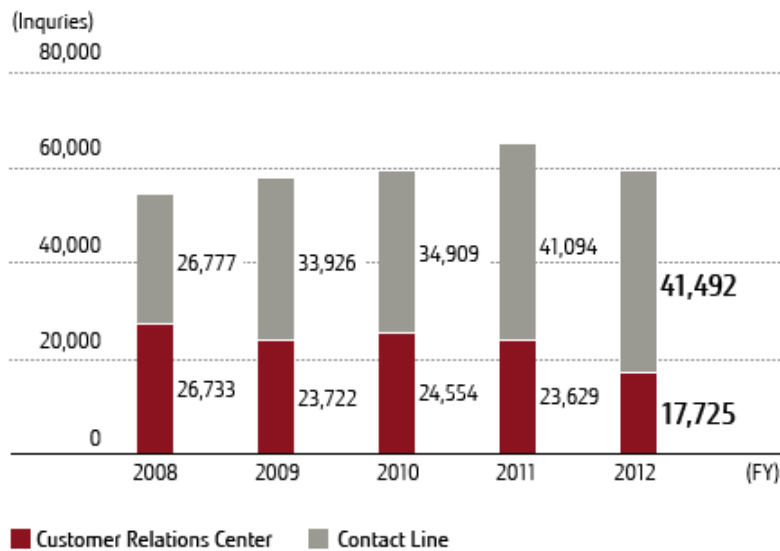
The Fujitsu Customer Relations Center and the Contact Line act as a clearinghouse that links the customer to the best line of communication for answering their inquiries. They not only contribute to increasing customer satisfaction through their accelerated responses, but also extract customer feedback, which is reported to the departments responsible for development and quality improvements of the related products and services.

Note that when we receive opinions or when something is brought to our attention in the form of a complaint from the customer, the specific content of that feedback or complaint is reported as a special bulletin to our executives.

Fujitsu Customer Relations Center/Fujitsu Contact Line



Trends in Inquiries Addressed to the Customer Relations Center



PC Support Center for Individual Customers

To handle the diversifying needs and environments of our individual customers, we have put in place the "personal products support desk" to provide consultation concerning Fujitsu personal computers. Through this support desk, we are building a system for handling a wide range of questions on matters regarding the use, troubleshooting, and servicing of Fujitsu personal computers.

Examples of Improvements Based on Customer Feedback

- Change to charging port position on our tablet

For our "STYLISTIC" tablet, we received the following feedback from our customers: "Connecting the AC adapter to the tablet with it leaning against its special case makes the unit tip to one side. Is the unit not meant to be recharged when leaning up against its case?" and "If it were possible to use the tablet with it stood up against its case without using the charging cradle, it would be lighter to carry about. Could you therefore change the position of the charging port?"

Consequently, we changed the layout for the tablet, putting the charging port on the left and right sides. This change will be introduced for the new Fall/Winter 2013 model.

Placing Importance on Connecting with Our Customers

Fujitsu Family Association

The Fujitsu Family Association was founded in 1964 for our corporate clients and allows members to exchange information and improve each other's skills. As of the end of FY 2012, it had 11 chapters and LS Research Committees^{*6} throughout Japan with some 3,500 members. It is the largest organization of users of information and communications systems in Japan.

The association's activities consist of branch and head office activities. Branch activities in FY 2012, which targeted things like promoting ICT management for an increasingly globalized world, conducting activities that capitalize on local characteristics, and standardizing the quality of member services, took the form of networking events among members as well as training and research activities. Head office activities included an overseas seminar in the US and the fall conference in Okinawa to commemorate 40th anniversary of the reversion of Okinawa to Japan. Some 1,000 members participated in the fall conference from around the country. The association also put out five issues this year of its Family magazine for members and the Web version, e-Family.

The LS Research Committee held research section meetings on 16 themes as part of its research activities on leading-edge management and ICT, and published a summary report. Furthermore, we held seminars and research meetings at 11 local chapters to provide problem solving and practical business support to local members.

The Family Association continued its support this year for recovery efforts in areas hit by the Great East Japan Earthquake. Association volunteers visited the affected areas in August 2012, followed by a discussion of what the association could do to help with recovery efforts. This discussion will be held again in FY 2013.

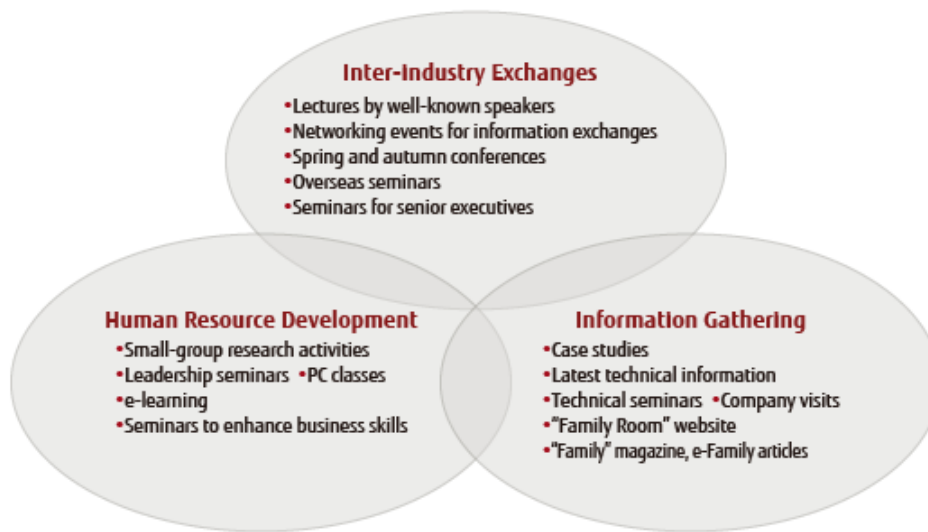
The Family Association has offered five points that will guide its activity policy in FY 2013, with the aim of making the user community a more appealing one than ever.

1. Work as a community of users supporting ICT in Japan to promote activities that help with the further growth of association members
2. Standardize member services through the promotion of activities that capitalize on local characteristics and enhanced coordination among branches
3. Continue to provide support for recovery from the Great East Japan Earthquake
4. Promote research activities and information sharing with respect to advanced ICT
5. Strengthen mutual communication among members

*6 LS Research Committee:

This committee, originally formed as the "Large Systems Research Association" in 1978, was merged with the Fujitsu Family Association in 2007 with the renewed purpose of carrying out research on leading-edge technologies and concepts, and implementing effective ICT utilization that will contribute to members' growth.

Fujitsu Family Association



Directions in Advertising

In all advertising and publicity activities in the Fujitsu Group, we strive to observe all laws and corporate internal regulations and to only use fair and appropriate expressions and graphic symbols.

Main advertising and publicity activities

- TV programming: Fujitsu sponsors "See the world by train" and "Fight! KAWASAKI Frontale (a Japanese soccer team)" for Japanese TV.
- TV commercials/newspaper advertisements: In Japan, Fujitsu places advertisements for Fujitsu products in daily life. The themes of this series of press advertisements have included firefighting, farming, the Automated Meteorological Data Acquisition System, the Subaru telescope, datacenters, and global themes (healthcare).
- Event sponsor/co-sponsor: Fujitsu Ladies Golf Tournament, Izumo All Japan University Ekiden, Fujitsu Concert Series (classical), Japan Science & Engineering Challenge (JSEC), others

Marking and Labeling of Products and Services Regarding Quality and Safety

Fujitsu is dedicated to observing all laws and internal regulations related to marking and labeling of products and services regarding quality and safety.

While we did not experience any major legal violations during FY 2012, there was one instance where an internal inspection uncovered a violation of the Electrical Appliances and Materials Safety Act that regulates product safety (the sale of a product without a PSE mark). The results of this inspection and a measure to prevent future violations were reported to the Kanto Bureau of Economy, Trade and Industry of the METI. The reason for the improper marking appeared to have involved human error, and more thorough checking of products before they are shipped was implemented as a measure to prevent recurrence. It has since been confirmed that proper marking is now being carried out.

Quality Initiatives

The Fujitsu Group, to further enhance the trust placed in it by customers, practices quality management, and works to achieve process improvements through visualization of its efforts regarding quality, and with QMS.

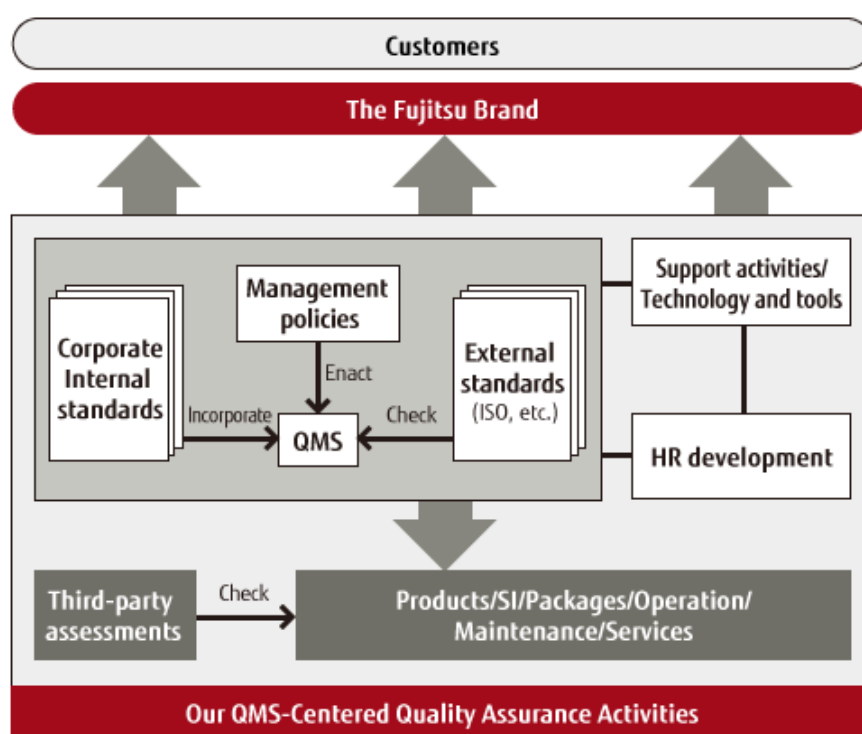
The Pursuit of Quality

Quality that Builds Trust, Safety and Security

The Fujitsu Group attaches fundamental importance to quality in all business activities to ensure that everyone can equally enjoy the benefits provided by ICT with safety and security. Our aim is to achieve a level of quality in all products and services that satisfies customers.

To accomplish this we have established and maintain the quality management system (QMS). Through the QMS we regularly confirm the progress of the PDCA (Plan, Do, Check, Act) cycle in the light of ISO and other international certification standards, and make process improvements to achieve even higher quality.

Our QMS-Centered Quality Assurance Activities



The Pursuit of Quality and Safety

Fujitsu responds by anticipating changes at our customers and their business environments so as to continue to provide them with appropriate products and services. At every stage from design through evaluation, production, to sales and support, we perform our quality improvement activities in line with the following principles.

Quality Principles

- We pursue quality from the customer's perspective.
- We build in quality that anticipates changes.
- We achieve quality consistent with our social responsibilities.
- We use first-hand feedback based on the actual situation.
- We work with our business partners to improve quality.
- We seek to make public quality-related information transparently.
- We foster employees who think about quality.

Based on the policy of emphasizing safety in all aspects of our business activities, we strive for assured safety in product designs, collection and the publication of information on product-related problems, and rapid response to such problems.

Acquisition of ISO 9001 Certification

Based on our belief that better processes create better products and services, Fujitsu is continuously improving our processes to meet the needs of the market and our customers. This ongoing effort has led to the certification under ISO 9001. As of March 31, 2013, 23 of our divisions had obtained ISO9001 certification.

Safety Assurances Based on the Fujitsu Product Safety Charter

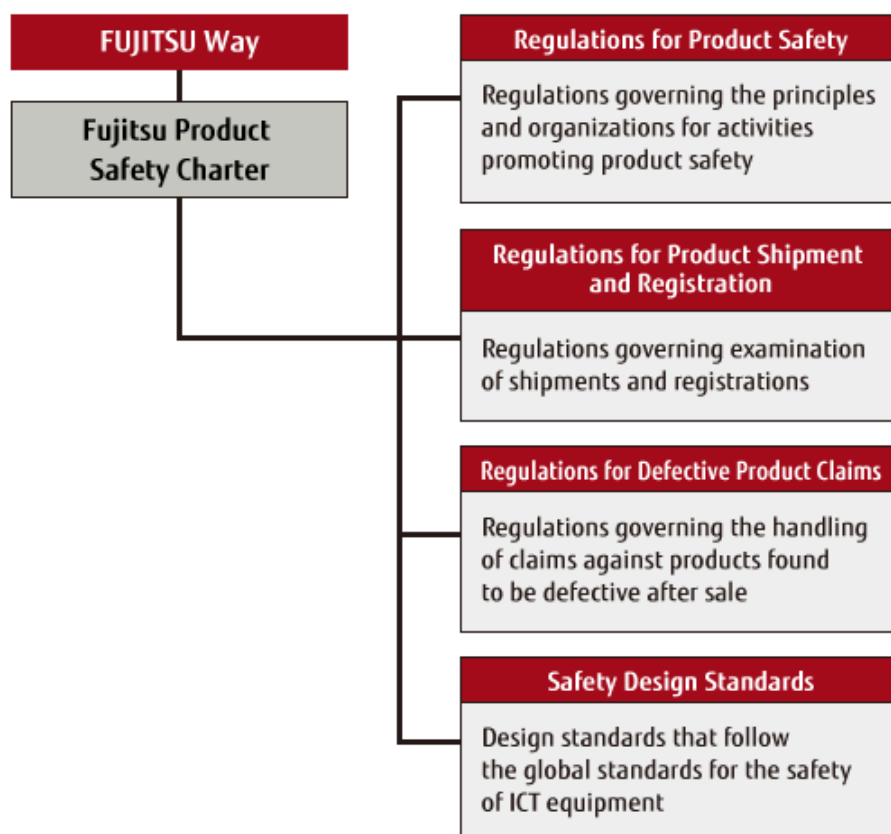
Quality is the basis of brand value for the Fujitsu Group. Products and services that customers can safely use is the essence of the Fujitsu Group's business. Based on this philosophy, in June 1994 Fujitsu formulated the "Fujitsu Product Safety Charter" ahead of the implementation of Japan's Product Liability Act (effective from July 1, 1995).

Based on the Fujitsu Product Safety Charter, we have revised and put in place various regulations and technical standards regarding product safety, and have taken steps to distribute this information through such means as new employee orientations, group training courses for technical departments, and quality conferences.

Fujitsu will continue to actively adhere to the following points in an effort to establish and maintain a corporate culture that assures safety.

- We will comply with laws and regulations regarding product safety, including the reporting of product accidents.
- We will put in place and comply with independent safety standards, and establish a suitable quality assurance structure.
- We will compile data on product accidents and related information.
- We will respond to product accidents and other incidents.

The System of Quality and Safety Regulations

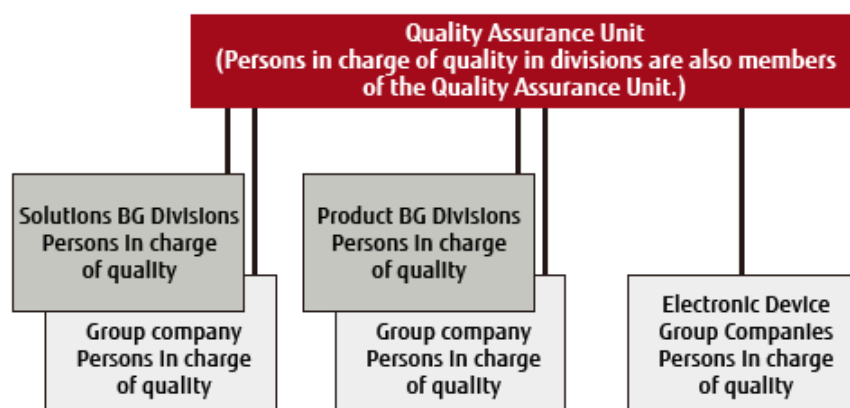


Our Approach to Promoting Quality Assurance

Fujitsu has established a dedicated unit for quality management within each business division and Group company to ensure that it is able to provide customers with high-quality products and services.

Also, through the Quality Assurance Unit, which consists of representatives of these dedicated units, we promote information sharing, propose countermeasures, and improve support structures in ways that transcend organizational barriers. In this way, we work to establish a QMS that creates added value for the customer.

The Quality Assurance Structure



System for Addressing Major Quality Problems with Products and Services

In the event of a major quality problem concerning a product or service, directors and employees immediately report to the Risk Management & Compliance Committee in accordance with risk management regulations, which then reports to the department manager according to the pre-defined reporting structure. The department manager quickly addresses the problem and reports on progress to the committee, responding to any instructions along the way. When a solution comes to light, the department manager informs the committee of the history leading up to the risk and measures to prevent recurrence. The committee can instruct the department manager to also report this information to the Board of Directors and Management Council.

No major quality problems occurred with products or services in FY 2012

Improving Quality of Products and Services through Qfinity

Since FY 2001, Fujitsu has implemented Qfinity, which are unique quality improvement activities, in all divisions. The word Qfinity was created as the combination of "Quality" and "Infinity" to express the concept of our commitment to the infinite pursuit of quality.

The Qfinity concept emphasizes a quality improvement model using the PDCA cycle that exhaustively pursues not only better product functions and reliability but also quality improvements in all phases of work, including efforts to improve customer response and delivery and reduce costs.

In each division, we are moving forward with efforts on themes that reflect the division's major policies and the issues that arise in the workplace on a daily basis. Project activities include both group activities concerned with a specific theme and individual activities to propose reform and improvement based on their findings. In principle, all Fujitsu employees participate in at least one of these activities.

- FY 2012: 6,528 project initiatives (as of March 31, 2013)
- FY 2012: 84,189 improvements/proposals (as of March 31, 2013)

Since FY 2011, Fujitsu has been conducting training sessions where guidance is given to effectively leverage Qfinity for quality innovation as well as quality improvement. 28 sessions were held in FY 2012, with 299 people engaged in promoting quality improvement in their workplaces taking part.

Information on Qfinity is shared internally using the Qfinity System, a web-based information system on the corporate intranet. It is used to benchmark the objectives and processes of other divisions, as well as to acquire information and knowledge on such topics as technologies and expertise.

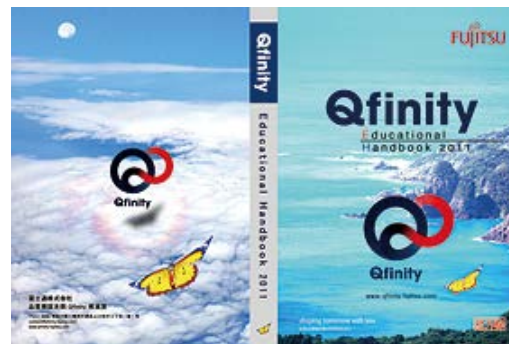
Qfinity Group-Wide Quality Improvement Activities



To publicize the successes of each Qfinity activity throughout the Group, we make information available to each employee in the Fujitsu Group through the Qfinity website on our corporate intranet. We also hold a Group-wide Qfinity conference every year at which best practices from all Qfinity activities during the year are introduced. In addition, awards are presented for these best practices at the annual celebration of the anniversary of Fujitsu's founding.



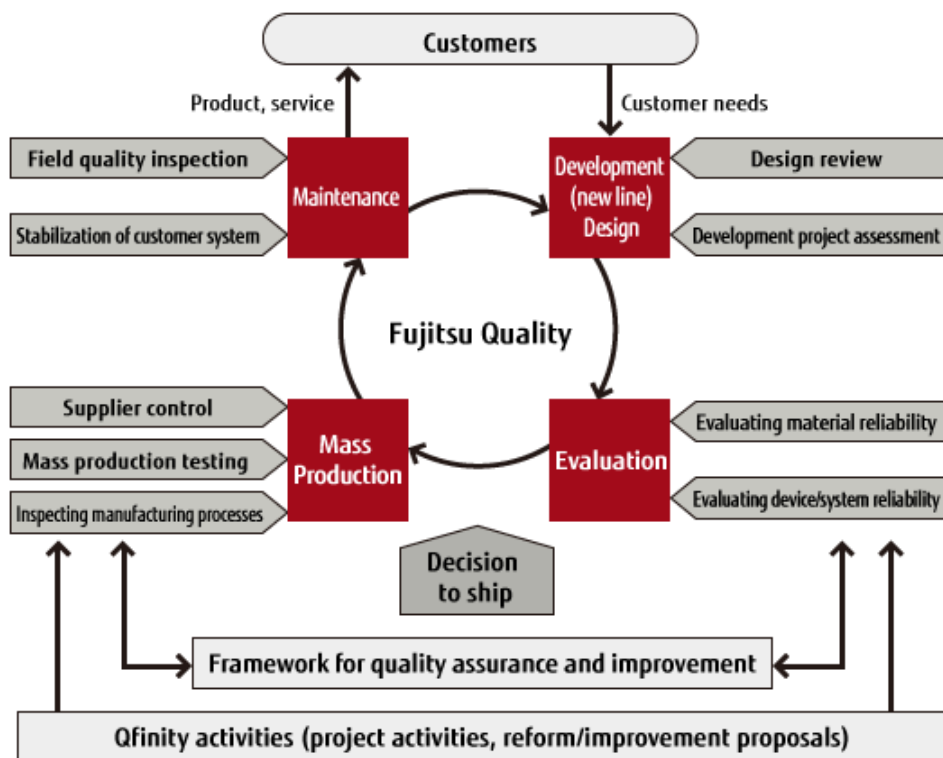
Each year these Qfinity examples are collected in a handbook that is distributed to new employees and employees participating in training.



Customer-Centric Quality Assurance Activities for Products and Services

In providing products and services, we adopt the customer-centric perspective. This attitude is central not only at the design review stage but also at every stage of the development and production process, where we perform evaluations, asking, "does it meet customer needs and expectations?" Through this process, we work from an objective standpoint to bring products that provide the value that customers expect.

Flowchart for Quality Assurance Activities



Fostering Experts Who Support Product Safety

As part of efforts to ensure product safety, in FY 2003 Fujitsu established its own certification program to train Product Safety Experts. Those who complete the program are certified by the managing product safety department of the Quality Assurance Unit. 213 people have been certified as of the end of FY 2012.

Certified Product Safety Experts verify the safety of products at design review stage (from the initial stage of development to the decision to ship). When a product cannot be confirmed as safe, it does not receive final approval to ship. In addition to verifying conformance to safety requirements in Japan and overseas as well as to Fujitsu's own standards, these experts also look at the design stage from the perspective of preventing recurrence of problems that happened with other products in the past. They also take follow-up training twice a year and an annual qualification renewal test to maintain and improve their skills.



Product Safety Experts in training

The concept of averting product accidents at the design stage has become increasingly important. This requires not only familiarity with the accidents or hazards associated with an existing product, and with other products incorporating similar functions and structures, but also practical knowledge and assessment of any potential risks associated with the nature of the product at the design stage and the way it is used, viewed from the perspective of the user.

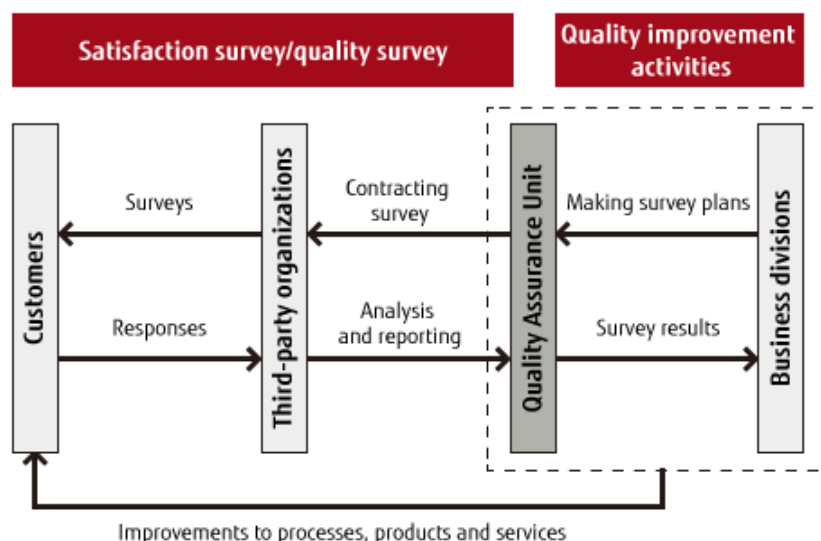
Accordingly, in FY 2010 Fujitsu established internal standards for the conduct of product safety risk assessments and began training Product Safety Risk Assessors. FY 2010 saw us begin applying these standards to products in the PC segment, and plans are in place to expand them to the mobile phone segment in FY 2013. As of the end of FY 2012, we have 128 registered Product Safety Risk Assessors.

Going forward, we will be developing experts in anticipation of new safety standards to be introduced in Japan and overseas as we strive to further improve product safety.

Satisfaction and Quality Surveys by Third-Party Organizations

The products and services provided through Qfinity and other activities are only delivered and provided when they reach a level of quality that satisfies our customers. We also implement customer-satisfaction and quality surveys by third-party organizations for these products and services, and have received particularly good results for customer satisfaction with reliability (FY 2012 surveys covered 4 products, with 1,825 responses collected). As a result, when this information is circulated to all parts of the Company, it can be reflected in developing the next products and services. Moving forward, we will continue to work to improve quality through the twin pillars of Qfinity activities and various surveys.

Flowchart for Satisfaction and Quality Surveys



With Our Suppliers

Basic Approach to Suppliers

The Fujitsu Group is committed to building long-term relationships of trust with our suppliers by continuously learning from each other. We also strive to achieve harmonious coexistence with our suppliers so that both of us, as good partners, can further exert our respective strengths.

In addition, we support suppliers' efforts to enhance their BCM (business continuity management) capabilities and compliance.

Promoting Socially Responsible Procurement

Socially Responsible Procurement Initiatives

In procurement, Fujitsu's policy is based on harmonious coexistence with its suppliers, fair and proper evaluation and selection of suppliers, and the promotion of socially responsible procurement activities. Guided by this policy, Fujitsu conducts procurement activities worldwide.

We work together with our suppliers to implement procurement activities grounded in the principles of CSR. In particular, in March 2006, we published our CSR PROCUREMENT GUIDELINES, which state our requirements such as respect for human rights, labor, health and safety and fair trading, asking our suppliers for their strict compliance in writing. Furthermore, in November 2011, we revised our CSR PROCUREMENT GUIDELINES to clarify our stance on the conflict minerals issue.


Since 2007, we have continuously conducted written surveys every year to ascertain progress status and CSR activities systems at our suppliers.

We surveyed 743 suppliers in FY 2012 and out of the 200 major suppliers surveyed, about 80% were found to be actively engaged in CSR activities.

In FY 2013, in addition to the conventional CSR activities, we will be heavily focused on the survey and information disclosure of conflict minerals^{*1}, aiming at ensuring transparency in the supply chain and practicing responsible mineral sourcing.

^{*1} Conflict minerals:

Conflict minerals are minerals whose mining or trading finances armed groups and fosters conflict, or are closely related to such issues as human rights abuses or labor issues. The Dodd-Frank Wall Street Reform and Consumer Protection Act enacted in July 2010 requires U.S. and foreign companies listed on U.S. stock exchanges to report the use of conflict minerals such as tantalum, tin, tungsten, gold and any other minerals named by the U.S. State Department to the U.S. Securities and Exchange Commission (SEC).

-  [FUJITSU CSR Deployment Guidebook](#) [164KB]
- [Fujitsu Procurement Policy and CSR Procurement Guideline](#)

FUJITSU CSR PROCUREMENT GUIDELINES

1. Protection of the Global Environment

Complying with the Fujitsu Group Green Procurement Direction, we promote the establishment of environmental management systems (EMS), and we aim to supply products and services that involve low environmental load and do not contain hazardous substances

2. Compliance with Laws and Regulations

We adhere to applicable laws, regulations and accepted social practices governing our local and global businesses

3. Respect for Human Rights, Labor, Health and Safety

- We respect individual human rights and do not unfairly discriminate against people based on race, color, religion, creed, sex, social status, and physical or mental disability, and we do not engage in human rights abuses such as sexual harassment. Also, we do not induce anybody to infringe such human rights or tolerate such actions.
- We establish comfortable work environments for the security and health of our employees.
- We do not use child labor or any form of forced or compulsory labor.

4. Assurance of Safety and Quality of Products and Services

We maintain high standards of safety and quality in our products and services.

5. Maintenance and Promotion of Information Security

We maintain and promote information security in order to properly protect our own information and information systems and those of third parties.

6. Fair Trade and Corporate Ethics

◦ Fair Trade

We promote fair, transparent and free competition and do not engage in any illicit trade.

◦ Protection of Confidential Information

We maintain and promote proper handling of confidential information, including third parties' confidential and personal information.

◦ Protection of Intellectual Property

We strive to obtain, maintain and utilize the intellectual property of others, understanding the role that intellectual property plays as an important resource to underpin organizations' business activities.

◦ Prohibition of bribes

We do not engage in any bribery of public officials or any similar activities, or any corruption, extortion, or appropriation through the abuse of one's position in the organization.

Addressing the Conflict Minerals Issue

We view the responsibility of corporations regarding conflict minerals as an important CSR issue, and work together with Fujitsu Group companies and suppliers to increase the transparency of the supply chain in purchasing activities and to ensure responsible mineral sourcing practices.

Informing and Emphasizing the Importance of CSR to Procurement Staff

Through education and training, Fujitsu keeps employees in charge of procurement informed of the importance of CSR-conscious procurement activities. In FY 2012, we held training on such themes as compliance with the laws governing subcontracting and worker dispatching, information security, and personal information protection in procurement activities as well as CSR-conscious procurement and green procurement activities.

In FY 2013, we will continue similar education to further increase our procurement staff's awareness of CSR issues.

Collaborative Promotion of CSR with Suppliers

Promoting Green Procurement

We have set out the basic requirements for environmentally sound procurement of components, materials and products in the Fujitsu Group Green Procurement Direction and are working with our suppliers on [green procurement](#) activities.

Specifically, the Fujitsu Group requests that all of its suppliers establish an environmental management system (EMS) (subject to third-party certification, in principle), which is designed to ensure that suppliers continuously implement environmental burden reduction. We also ask that our suppliers build a chemical substances management system (CMS^{*2}) based on the JAMP^{*3} guidelines for the management of chemical substances included in products.



Woodland preservation activities

In regard to CMS, we monitor the status of CMS creation at our material/parts suppliers and, if their systems are inefficient, provide support with additional monitoring when we receive plans for improvement. By providing support for building their CMS throughout the Fujitsu Group, we work to improve the management level for chemical substances in products in the supply chain.

As new activities starting in FY 2010, we are undertaking activities involving limiting and reducing CO₂ emissions and conserving biodiversity. We ask our suppliers to understand the importance of these themes and undertake activities with specific goals.

Furthermore, we support our suppliers' efforts in this area by providing biodiversity conservation guidelines for them which include concrete examples of such efforts and information on ways of promoting such activities. We also hold seminars related to CO₂ emissions reduction and biodiversity conservation. In 2011 and 2012, Fujitsu's purchasing unit held woodland preservation activities. This experience allowed both the unit and our suppliers to reconfirm the importance of preserving woodlands as they worked hard together in removing weeds and thinning trees.

The Fujitsu Group will continue to work together with our suppliers towards lessening the environmental impact of our supply chain.

^{*2} CMS: Chemical substances management system. Refers to a means or a system to properly manage the chemical substances contained in products.

^{*3} JAMP:
Joint Article Management Promotion Consortium

Supply Chain BCM

To ensure the stable supply of products and services to our customers in the event of major disasters and other unexpected contingencies, Fujitsu has made a continuous commitment to strengthening the BCM capabilities of our suppliers since FY 2007. This commitment is based on the belief that strengthening BCM capabilities throughout the entire supply chain is essential.

Each year, Fujitsu conducts a questionnaire survey of its suppliers on how they address BCM. In FY 2012 we surveyed roughly 760 major suppliers (at about 1,960 sites) by questionnaire. We analyzed the results from around 1,780 sites (as of September 1) and provided feedback to our suppliers.



BCM briefing for suppliers

In February 2013, as part of efforts to strengthen BCM capabilities in the supply chain, we held a briefing on BCM for suppliers, attended by 133 individuals representing 104 companies. At the briefing, we shared survey analysis results and information on the latest trends involving BCM in an effort to further promote BCM activities.

Furthermore, in FY 2012, we held a total of five BCM training seminars for around 315 people representing around 200 of our major suppliers related to the solution business. In March 2013, each of these suppliers submitted reports concerning the status of BCM promotion. Fujitsu assessed the reports and provided feedback.

In FY 2013, we plan to conduct a survey, shifting the emphasis from BCP formulation to BCP execution, and hold a briefing for our suppliers on further BCM enhancement.

Thorough Enforcement of Compliance

The Fujitsu Group is dedicated to ensuring compliance throughout our entire supply chain.

Every year, we conduct a written survey to assess the status of compliance system formation in our suppliers' supply chains, which will verify the thoroughness of compliance enforcement. Also we are promoting business transactions with the consideration of risk assessment by identifying the products and regions that are concerned with high risk of labor and other problems and by determining whether or not we are procuring from the regions in question.

In addition, in February 2012, we revised our agreements with suppliers by adding provisions on the elimination of anti-social forces and other such groups, for the purpose of preventing damage by anti-social forces (and avoiding any encouragement of their activities). The Fujitsu Group will have no relationship whatsoever with anti-social forces, including through suppliers.

Promoting Information Security Measures

The Fujitsu Group has set the goal of eliminating information security breaches and, along with our suppliers, we continuously implement measures to prevent such breaches and to prevent any reoccurrences should they still occur. These measures include education, enlightenment, auditing, and information sharing.

In recent years there has been a significant increase in commercial use of external services such as cloud computing in the wake of wider adoption of business continuity management and social networking services aimed at information sharing. With the rapid increase in opportunities to use smart devices such as smartphones and tablet PCs as infrastructures for these services and with the diversification and technological advances of related networks, we are facing the highest-ever potential risk of information leaks due to fast-changing technologies and environments.

We have thus become committed to accurately ascertaining the latest changes in the ICT environment and deterring new kinds of risks involving information leaks that arise from the use of external services, servers, and smart devices. When we start business with a new supplier, we have made it a rule to explicitly state in the contract that the supplier shall manage information security and handle personal information at the same level as Fujitsu does. If any serious problem in information security occurs at a supplier, or if a supplier shows no improvement in its security management, we reconsider the business relationship with the supplier and may discontinue placing new orders.

In recent years, we have been working to implement information security measures equivalent to those used in our domestic (Japanese) activities for an increasing number of offshore development projects with overseas partners.

Main efforts in FY 2012

(For suppliers of software development, services, or hardware manufacturing)

- Information Security Management Regulation was revised and applied (Oct 2012)
- Information security seminars (Dec. 2012) A total of some 1,000 companies (some 1,250 individuals) attended.
- Questionnaires to suppliers on information security measures (Feb. 2012 through Mar. 2013) About 1,500 companies
- Information security audits (on-site) of our suppliers (Apr. 2012 through Mar. 2013) A total of some 140 companies

Compliance Line Available to All Suppliers

Fujitsu launched a confidential communication channel, called the "Compliance Line," available to all suppliers, in August 2009. The Compliance Line is to receive reports from suppliers on any matters of potential or actual non-compliance action with regard to our purchasing activities. Through the channels we have set up both internally and externally, we verify and investigate the facts of every report and respond quickly.

We forbid any kind of reprisal being taken against people making reports or the supplier itself as a result of the report.

Partnerships with Our Suppliers

In 1997, Fujitsu established its suppliers' performance review (SPR^{*4}) system, in which about 200 major suppliers are comprehensively evaluated for their products and efforts from the standpoint of quality, technology, price, supply, the environment and reliability. Since FY 2008, the results of written surveys on matters related to CSR, information security, and BCM have been included in the evaluation.

For our partners in the solutions business, we developed a similar review system (PPR^{*5}) in 2004. Since 2008, we have reviewed about 1,320 solution-related system supplier companies and provided the results as feedback to about 220 of our main suppliers.

With our main suppliers, we hold business review meetings (QBR^{*6}) organized by our top management in which we directly share the results of our evaluation with suppliers and explain the outlook of our business and procurement strategies.

*4 SPR:

Suppliers' Performance Review

*5 PPR:

Partners' Performance Review

*6 QBR:

Quarterly Business Review

Fujitsu Supplier Day

Since 1997, we have held Fujitsu Supplier Day to strengthen our partnership with suppliers. At these events, we present letters of appreciation to those suppliers who have made exceptional contributions to our business, and the company president and the VP in charge of Purchasing give presentations to share our procurement policies in line with Fujitsu's business plans.

The FY 2012 event was held in January 2013 and was attended by approximately 800 representatives from some 330 domestic and overseas suppliers.



Social gathering for suppliers

With Our Shareholders and Investors

Our Basic Stance

Based on the statement "We seek to continuously increase our corporate value" in the Corporate Values of the Fujitsu Way, to raise corporate value and meet the expectations of shareholders and investors, we aim to achieve long-term sustainable growth and profit, and pursue strategic business expansion and focused management, while maintaining a sound financial standing.

We also provide timely and accurate disclosure of our corporate activities and financial information, improving management transparency so that shareholders and investors can better understand how well we perform in increasing corporate value.

Basic Policy on Information Disclosure

Fujitsu emphasizes fairness and continuity in disclosure of information, in accordance with the Financial Instruments and Exchange Act and other laws and regulations, as well as the rules of the exchanges on which its shares are listed.

Moreover, our policy is to be proactive in disclosing any information that we judge to be effective for helping shareholders, investors and other stakeholders to deepen their understanding of Fujitsu, even if such disclosure is not required by laws, regulations or other rules.

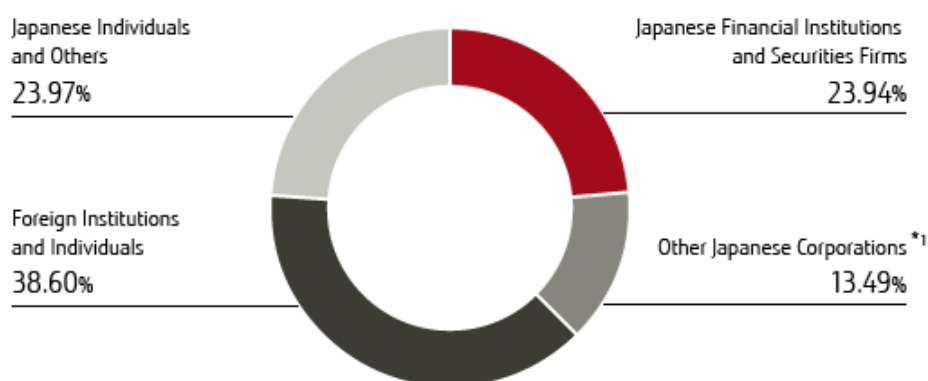
Basic Policy on Returns to Shareholders

Article 40 of Fujitsu Limited's Articles of Incorporation grants the Board of Directors the authority to distribute retained earnings. As part of Fujitsu's basic policy on the exercise of this authority, we believe that a portion of retained earnings should be paid to shareholders to provide a stable return, and that a portion should be retained by the Company to strengthen its financial base and support new business development opportunities that will result in improved long-term performance. In addition, taking into consideration the level of profits, Fujitsu aims to increase the distribution of profits to our shareholders when the financial base is sufficiently strong enough, including through share buybacks.

As for our nonconsolidated performance for the fiscal year ended March 31, 2013, performance took a downturn at Fujitsu Semiconductor Ltd., a subsidiary dealing in semiconductors, and Fujitsu Technology Solutions (Holding) B.V., a subsidiary in Europe, leading us to post an extraordinary loss. We were also forced to recognize unfunded retirement benefits due to changes to accounting standards at Fujitsu Services Holdings PLC, a British subsidiary. Thus, we posted a loss from revaluation of stock of approximately 380 billion yen for mainly unrecoverable shares from these three firms. Due to the posting of this current valuation loss, nonconsolidated retained earnings were negative and we deeply regret that we will not be paying year-end dividends.

Only interim dividends (at 5 yen per share) will be paid for the fiscal year under review.

Equity Shareholdings by Type of Shareholder (as of March 31, 2013)



*1:

The 118,892 thousand shares of Fujitsu Ltd. stock held by Fuji Electric Co., Ltd. and its consolidated subsidiaries as retirement benefit trust assets are categorized under the shareholdings of "Other Japanese Corporations."

Communicating with Shareholders and Investors

We are actively involved in IR activities in Japan and abroad, including holding briefing sessions for institutional investors and securities analysts, responding to individual requests from investors, visiting Japanese and international investors, and transmitting information through the Fujitsu website as part of our efforts to improve communications with all our investors.

We also disseminate press releases, providing information through the media to individual investors and the public at large as part of our active efforts to ensure fair disclosure.

The Annual Shareholders' Meeting is taken as an opportunity to improve communications with all our shareholders, for example by displaying our products so as to increase understanding of Fujitsu. We also carry out questionnaire surveys of opinions of our Annual Shareholders' Meeting, and the results are used to improve subsequent meetings.

A Variety of Meetings for the Investor Community, both in Japan and Overseas

In addition to briefings on financial results, we provide a variety of briefings on management policy and business targeted at institutional investors and securities analysts in Japan.

For institutional investors outside Japan, we hold road shows (explanatory meetings for investors) regularly in Europe and North America, and local staff members also visit investors individually. In FY 2012, we held about 970 meetings for institutional investors and securities analysts (56% of them outside Japan and 44% within Japan).

Communicating with Individual Shareholders and Investors

We prepare and send out interim and year-end financial reports for individual shareholders and investors. We promptly disclose IR materials used at analyst briefings and materials and images from presentations of financial results, utilizing PDF files and streaming technology.

When we report interim dividends, we also carry out a questionnaire survey to derive feedback from a wide range of shareholders and investors. This feedback is used as a reference for various measures.

Publication on IR websites

Fujitsu publishes information that we would like our shareholders and investors to know on our Japanese and global IR websites. Data from briefings held in Japan is also translated into English and posted on our global IR site.

We also use our IR websites for information disclosure and communication to deepen people's understanding of Fujitsu through IR activities, such as early public release of proposals submitted at shareholders' meetings. Actions we took in FY 2012 included adding the ability to change font size and posting Web versions of our annual reports as well as the "How to Use Our IR Site" handbook for Internet beginners.

- [Japanese IR site](#)
- [Global IR site](#)

Main Results of IR Activities in FY 2012

		Apr. 2012	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.	Jan. 2013	Feb.	Mar.
In Japan	Annual Shareholders' Meeting			●Annual Shareholders' Meeting									
	Management Direction Briefing						●Small Briefing with President Yamamoto			●Nomura Investment Forum		●Management Direction Briefing	
	Financial Results Briefings		●Full-Year Financial Results		●1Q Financial Results			●2Q Financial Results				●3Q Financial Results	
	Business Briefings	●R&D					●Mobile Phones						
Outside Japan	Roadshow		●Europe	●North America			●Asia		●North America				

In FY2012, we held about 970 meetings for institutional investors and securities analysts (56 % of them outside Japan and 44 % within Japan)

Governments & Industry Groups (Public Policy)

Activities Related to Public Policy

Fujitsu participates in government and industry group councils, committees and forums, and promotes activities relating to the investigation of concrete proposals and measures to resolve social issues, as well as the creation and revision of legal systems and promotion of international collaboration.

In FY 2012, Fujitsu worked with about 1,250 partners such as industry groups, research organizations, and NGOs on activities including the following.

Participation in the World Economic Forum

The World Economic Forum (WEF) on East Asia, held in May 2012 in Bangkok, Thailand, saw some 700 participants from more than 40 countries, regions, international organizations, etc.

Co-chairing the forum, the President of Fujitsu talked about the Great East Japan Earthquake and flood in Thailand, and also touched on how simulations using supercomputers are an effective tool in enhancing flexibility in handling global risk, including that in supply chains, and deepened cooperative ties internationally regarding natural disasters.



President Yamamoto, co-chair of the plenary session of the World Economic Forum on East Asia
(Photo courtesy of the WEF)

Promoting e-Government

While Japan compares favorably internationally when it comes to infrastructure deployment and usage of ICT in the private sector, the government's sluggishness in adopting ICT is a major issue.

As the joint committee chair of the Committee on e-Government of the Keidanren, Fujitsu Chairman Mazuka is continuously encouraging the construction of a base for e-Government to bring more convenience to citizens' lives and streamline government and make it more transparent. He is also engaged in getting laws in place for enhancing command-giving functionality within the government. In December 2012, he made a strong appeal as to the importance of e-Government from the point of view of its citizens at a Keidanren symposium attended by many members of government and industry.



Fujitsu Chairman Mazuka giving a speech at a Keidanren symposium
(Photo courtesy of the Keidanren)

Approach to Social Contribution Activities

The Fujitsu Group will create new value and knowledge together with our customers, communities, and people worldwide through ICT, and contribute to sustainable development for the earth and society to achieve a prosperous future where people's dreams are fulfilled.

Fujitsu engages in social contribution activities together with a wide range of stakeholders and bases those activities on four pillars: ICT for Everyone, Support for Challenges, Community Engagement and Environment.

In order to energize our social contribution activities and share best practices, we are building and have made viewable a record of our activities on our internal system. We have also put in place an internal evaluation system for social contribution activities conducted using this database and are working towards implementation in FY 2013.



Volunteer Activity Support System

Fujitsu has established the following programs for supporting volunteer activities undertaken by employees.

- System of leave of absence for participation in Japan Overseas Cooperation Volunteers or Senior Overseas Volunteer: up to three years
- Accumulated leave: Five days paid leave per year, can be accumulated up to twenty days (to be used for specified purposes including volunteer work)

Promoting Learning & Education, and Cultural and Sponsorship Activities

Fujitsu-JAIMS Foundation



The Fujitsu-JAIMS Foundation originated from JAIMS, a nonprofit educational institution founded by Fujitsu in 1972. With the goal of fostering mutual understanding between Japan and the US and cultivating human resources in the Asia-Pacific region, the campus was established in Hawaii, where Eastern and Western cultures meld with one another. JAIMS has more than 23,000 graduates from 55 different countries and received the Foreign Minister's Commendation in 2006. It has become highly regarded for its efforts to promote international exchange.



JAIMS students

To expand these efforts into Asia, which has come to play an important role in global business in recent years, the Fujitsu-JAIMS Foundation was established in Japan in July 2012.

In April 2013, JAIMS moved its headquarters functions from Hawaii to the Fujitsu-JAIMS Foundation. With a mission to contribute to the development of the human resources and the formation of a community through knowledge co-creation in the Asia-Pacific region, the Foundation aims to develop business leaders capable of exercising their skills in the global business community.

One of the main programs offered by the Fujitsu-JAIMS Foundation is Global Leaders for Innovation and Knowledge (GLIK), an international management program developed based on the vision of Dr. Ikujiro Nonaka (Professor Emeritus of Hitotsubashi University), the global authority in knowledge creation theory. The goal of the program is to "nurture innovative leaders (leaders with practical wisdom) by arming them with a global perspective and local knowledge, giving them insights on how to capture the essence of situations at hand, exercise good judgment, and take action within the changing context." The participants study for 3.5 months in the Asia-Pacific region (Japan, Hawaii, Thailand, and Singapore) to nurture innovative leadership capabilities. They also round out their ability to work together with people from diverse cultural backgrounds, developing a global perspective and sensitivity to different cultures as they study with participants from Asia, and communicate with instructors who are preeminent authorities in their respective fields and with experts in each country. In addition, there are various other programs available, including a short-term business skill improvement course, where students study in Hawaii for a week.

Since the founding of JAIMS, Fujitsu has contributed working capital and set up an organization within the company to support JAIMS' activities alongside efforts such as advertising for the organization in Japan, offering advisory support for students studying abroad, and accepting foreign interns as part of its comprehensive support lineup. With the founding of the Fujitsu-JAIMS Foundation in Japan, Fujitsu unified itself with the foundation by incorporating its own practical wisdom, ICT, and expertise into JAIMS' activities. Fujitsu has thus been pushing forward with its social contribution activities, furthering promotion in academic and educational fields as well as international exchange.

- [Fujitsu-JAIMS Foundation](#)

Fujitsu Scholarship Program



Fujitsu established the Fujitsu Scholarship Program in 1985 to commemorate the 50th anniversary of its founding. The aim was to foster business leaders who, through their deep understanding of Japan's culture, society, and business methods will connect Japan with the rest of the world. 450 people have received scholarships as of April 1, 2013.

Although this program was started to provide scholarships for studying Japanese-style business management, it now also provides opportunities to participate in the Fujitsu-JAITS Foundation's GLIK program for business people in 18 countries and areas in the Asia-Pacific region.



Fujitsu Scholarship recipients

Every year, we receive many applications for Fujitsu scholarships. Scholarship recipients are selected based on criteria that include English language skills, academic record, and work experience, as well as a desire to make a contribution to their home country. Through efforts that include joint-recruiting programs, we work with Fujitsu Group companies doing business in the Asia-Pacific region to provide scholarships to people considering helping their country or community, and contribute to society by providing education rooted in local communities worldwide, aimed at developing business leaders and promoting cultural exchange and mutual understanding.

- [Fujitsu Scholarship](#)

Support for Mathematical Olympiad and Olympiad in Informatics



Fujitsu supports the Mathematical Olympiad Foundation of Japan and the Japanese Committee for the International Olympiad in Informatics (the latter being a non-profit organization) to help discover and foster valuable human resources who will play leading roles in the future development of society.

The Mathematical Olympiad Foundation of Japan was established in 1991 in order to discover gifted mathematicians for selection and entry as national representatives in the International Mathematical Olympiad (IMO) and to further develop their skills. The foundation is also committed to helping improve and promote education in mathematics from an international perspective. Fujitsu provided the basic funds for the establishment of the Foundation along with two other companies and one individual. It provides additional support including offering supplementary prizes to the top performers at the Japan Junior Mathematical Olympiad (JJMO) and the Japan Mathematical Olympiad (MMO), the latter from which national representatives for the IMO are selected.



23rd Japan Informatics Olympiad Award Ceremony

The Japanese Committee for the International Olympiad in Informatics was established in 2005 to train human resources in support of Japan's mathematics and information science sector. It provides support for participants of the International Olympiad in Informatics (IOI), a programming contest for junior and senior high school students.

As a supporting member, Fujitsu provides assistance in the committee's operation, and presents supplementary prizes to the top performers at the Japanese Olympiad in Informatics, from which national representatives for the IOI are selected.

Supporting a Programming Contest for Technical College Students



The programming contest is a competition for technical college students from all over Japan. Drawing on the knowledge they have acquired in their studies, participants compete with one another using their resourcefulness and skills in information processing technology.

Fujitsu has supported this contest as a special corporate sponsor since the 6th annual event in 1995. In 2009, in commemoration of the 20th anniversary of the founding of this contest, Fujitsu established the Fujitsu Special Prize, and has been presenting personal computers to members of the winning team as an additional prize ever since.

Since the 21st contest, Fujitsu has invited the winning team to its Kawasaki Plant. In addition to presentations and demonstrations by the students, we arrange discussions with a variety of Fujitsu employees, including engineers from the technology division.

These visits are beneficial to both Fujitsu employees and the students. Our employees are impressed by the unrestrained and flexible ideas of the students, while visiting the facilities provides an excellent opportunity for the students to observe the cutting edge of software development and project management methods.

In FY 2012, this contest was held in Omuta City in Fukuoka Prefecture, and will be held in Asahikawa City in Hokkaido in FY 2013. The contest demonstrates Fujitsu's commitment to encouraging the growth of the young ICT technologists, who will in turn support future society.



Tokyo National College of Technology students who won the Fujitsu Special Prize at the Technical College 23rd Programming Contest

Fujitsu Kids Project: shaping tomorrow with children



In 2007, at a time when Japanese society was becoming increasingly concerned about children's lack of interest in math and science, the Fujitsu Group launched the Fujitsu Kids Project, targeting 5th and 6th grade elementary school students. Based on the idea that one of a company's missions is to foster the next generation of human resources, the project seeks to convey to today's young people the joy of creating products and the wonder of technology.

To expand the project so that it covers the whole of Japan and reaches out into the future, the Group promotes the project primarily through its own website. This dedicated website, named "Fujitsu Kids: shaping tomorrow with children," is designed to make learning fun for children. Its wide variety of contents include answering questions such as "What is a supercomputer?" as a means of communicating information on the latest technology and the joy of making things to children in a way that is easy to understand. Other website content that is linked to the school curriculum includes information on environmental conservation activities, universal design, and how a computer works.



In addition to providing information via the website, the Fujitsu Kids Project holds events where children take part in activities that give them firsthand experience of the joys of science and technology.

In the summer of 2012, we held the Fujitsu Kids Event 2012 at our Kawasaki Plant in cooperation with the Japanese Committee for the Olympiad in Informatics. The aim of the event was to stimulate interest in technology and to nurture participants' dreams for the future. The fifth such event, it was attended by around 100 children who were selected at random from a large pool of applicants. Participants enjoyed learning how a computer works through games and other fun activities.

The children also had a chance to see how computers of the past worked and listen to stories from supercomputer engineers. Finally, the children expressed how they see tomorrow through pictures and words.



Group photo from Fujitsu Kids Event 2012

October 2012 also saw the hosting of a special event together with the Japanese Committee for the IOI at the Fujitsu booth at CEATEC JAPAN, held at Makuhari Messe. The nearly 100 participants, mostly elementary and middle school students, learned about how computers work through magic tricks. Many children gave their impressions of the event, saying things like "the magic tricks were cool," "the relationship between communications devices and numbers is interesting," and "it really taught me a lot about how computers and barcodes work."

Fujitsu will continue to conduct these and other activities in its efforts to familiarize children with computers.



At the CEATEC JAPAN event

Awards We Have Received

- Good Design Award 2008
With the aim of bringing content creation methods for children into wider use and expanding universal design for children, we have published the Fujitsu Kids Content Creation Handbook that encapsulates the expertise we acquired through creating the Fujitsu Kids Website. In December 2007 we put this handbook online on our "Fujitsu Kids: shaping tomorrow with children " website, and it is now used by many looking to create quality content.
- "2007 Goo Environment Awards" in the Kids Division (sponsored by NTT Resonant Inc.)
- Supreme Award in the Website Division of the "6th Consumer Education Materials Awards" (sponsored by the National Institute on Consumer Education)
Awarded in recognition of initiatives that convey the fun of making things and the greatness of technology.
- Grand Prize in the "Gadget, Animation & Technical Innovation Division" in the Second Corporate Website Grand Prix
Awarded for the uniqueness of the characters and preparations for the "Yumekata Lab" as part of our "Fujitsu Kids: shaping tomorrow with children " website for children.

Cultural and Sponsorship Activities



Japan Science & Engineering Challenge

Fujitsu is a special sponsor of the Japan Science & Engineering Challenge (JSEC), a research competition open to senior high school students and technical college students from throughout the country. As the competition aims to develop young people who contribute to the nation through science and technology, Fujitsu endorses it and provides its support as an ICT company.

The annual challenge, which is supported by the Cabinet Office and MEXT, is highly regarded among industry circles. The winner of the Japan Challenge takes part in the International Science and Engineering Fair, the biggest event of its kind in the world, held each May in the United States. Some 1,500 students from more than 50 countries take part in the fair. Among the 208 research projects submitted at the 10th tournament, held in school year 2012, 30 projects (from 12 individuals and 18 teams) made it to the final review in December 2012.



Fujitsu Concert Series

Since 1987, Fujitsu has sponsored the annual Fujitsu Concert Series, which invites the world's top conductors and orchestras to perform in Japan. Together, these foreign musicians and stunning soloists captivate the hearts of the Japanese audience. The Fujitsu Concert Series is held in line with our policy of providing ongoing sponsorship for popular first-rate orchestras from overseas. In FY 2012, seven performances were staged around the country by the Mariinsky Theater Orchestra, which is led by Valery Gergiev, one of the leading conductors of our time.



Fujitsu Presents Special Concert NHK Symphony Orchestra: Beethoven's Ninth Symphony

Fujitsu is a special sponsor of concerts performed by the NHK Symphony Orchestra, centered on Beethoven's Ninth Symphony. This concert has become an annual tradition that is held at the end of the year in Tokyo's Suntory Hall. For FY 2012, conductor Roger Norrington led a performance on December 27, 2012.



The Fujitsu Cup Masters Tournament

Since 1993, Fujitsu has been sponsoring the Fujitsu Cup Masters Tournament, a Japanese chess (shogi) tournament for players 40 years of age and over, and the only senior-level shogi competition of its kind. The players selected to play in the tournament include previous titleholders through to older players who still play competitive chess. They compete with one another in the knockout-style tournament to become champion. All matches are streamed live on the Internet. The championship match is held at the Asahi Yurakucho Hall, in front of an audience. The 20th iteration of the tournament saw matches played from April to September, 2012, with Yoshiharu Habu winning for the second year in a row.



Contributing to Society through Sports

The Fujitsu Group promotes sports as a building block of a sound society. Company sports encompass the track and field team, the Frontiers American football team, and the RedWave women's basketball team. These organizations strive daily to improve their skills, embodying Fujitsu's proactive spirit.

Track and Field Team



Established in 1990 with the slogan "fostering athletes that can compete globally," the Fujitsu Track and Field Team has been a leader in Japanese track and field ever since, awarded the Best Team Prize for the Top Athlete Support Award at the JOC Sports Awards in 2008. The team has produced Japanese representatives for six straight Olympics—from the 1992 games in Barcelona to the 2012 games in London. The top athletes who belong to the team actively participate in track and field clinics throughout Japan, helping to raise the level of track and field in Japan as well as fostering sports development in general.

In FY 2012, eight Japanese athletes participated in short- and medium-distance and walking races in the London Olympics. With further achievements that include participating for 23 consecutive years in the New Year Ekiden, held every year on January 1, the team is a leading presence in the world of Japanese track and field.



© Agence SHOT

Frontiers American Football Team



Established in 1985, Fujitsu's American football team named itself the "Frontiers" in recognition of its pledge to be a pioneer in the field of American football in Japan under the slogan "to be the best in Japan's amateur league, and at work."

The team won its first victory in 2003 in the Pearl Bowl, a tournament for the 12 East Division teams of the Shakaijin (working adults) league known as X-League, and has won again since then. It was also a runner-up in 2007 at the Japan X Bowl, the X-League championship game to decide the best Shakaijin team in Japan. With showings in the 2009 and 2011 Bowls as well, the team has established itself as an undisputed powerhouse.

Moreover, the Frontiers have been recognized as a Hometown Sports Partner by Kawasaki City where they are based, for community contributions. Since FY 2010, the team has been teaching in school physical education classes in Kawasaki City and engaging in other activities, as well, to popularize flag football, which is safe and easy to play.



© Agence SHOT

RedWave Women's Basketball Team



Following its establishment in 1985, Fujitsu named its women's basketball team "RedWave" with the goal of becoming like a red wave that poses a threat to even the most formidable of opponents. The team took its first victory at the 72nd All Japan Basketball Tournament (Empress Cup) in 2006, holding on to the top spot for the three straight years through 2008. RedWave fulfilled a long-held ambition in FY 2007 when it won its first Women's Japan Basketball League (W League) title (2007-2008 (ninth) season). The team has made it to the playoffs for eight consecutive years since 2005, and is now a highly-competitive force in the W League. The team came in third in the league in FY 2012.

As part of Fujitsu's social contribution activities and to encourage sports in the local community while building up the foundation of Japan's basketball world, the team has been recognized as a Hometown Sports Partner by Kawasaki City where the team is based, and it provides coaching in basketball workshops it conducts for elementary school students in Kawasaki City during PE classes. The team has conducted these workshops every year since 2004, with 10 workshops conducted in FY 2012.



Photo courtesy of NANO Association

Support for Kawasaki Frontale

A Japan Professional Football League (J-League) member since 1999, the Kawasaki Frontale soccer team's hometown is the city of Kawasaki. The team works to further the development of professional soccer, young local athletes, and sports culture.

The team set up the "Mind-1 Nippon" project soon after the Great East Japan Earthquake in 2011, and has been continuously engaged in supporting mid- to long-term recovery efforts in the affected areas.



© KAWASAKI FRONTALE

Sponsorship Activities



Fujitsu Ladies Golf Tournament

We have sponsored the Fujitsu Ladies Golf Tournament for professionals and amateurs since its inception in 1980. Held every October since 1983, it is among the more well-established LPGA tour tournaments in Japan. The 30th Fujitsu Ladies Golf Tournament, held October 12-14, 2012, attracted participation from 96 players.



Izumo All Japan University Ekiden (Road Relay)

Since 1989, 21 teams have battled it out each year in the Izumo All Japan University Ekiden, one of the big three collegiate road relay races in Japan. By supporting this competition, Fujitsu is helping to promote university students' sports activities. FY 2012's event was held on October 8, 2012, and Aoyama Gakuin University came in first.



International Support and Disaster-relief Activities



Supporting Tropical Rainforest Restoration Activities through Beverage Sales

As part of the Fujitsu Group's social contribution and environmental activities, Fujitsu sells its own private brand beverages to employees, a portion of the proceeds of which are directed to tropical rainforest restoration activities underway at the Fujitsu Group Malaysia Eco Forest Park. As of the end of FY 2012, a total of around 1.54 million beverages had been sold since the start of this initiative in 2009, which in turn has helped to raise awareness of social and environmental contribution activities among individual employees.

Activities that Contribute to Society by Group Employees

Employees of Fujitsu Group companies voluntarily participate in everyday social contribution activities, such as collecting used plastic bottle caps, stamps and prepaid cards and donating the proceeds to polio vaccine or seedling planting projects.

As one example of this, in December 2012, employee volunteers from Fujitsu's headquarters in the Shiodome City Center collected and resold books and DVDs as one effort to support the Shapla Neer (Citizen's Committee in Japan for Overseas Support), an international NGO doing volunteer work throughout South Asia. We plan to extend these activities to Group companies throughout Japan as we provide ongoing support.

Example Activities in Japan and Overseas

The following are examples of Fujitsu Group company activities worldwide.

Examples of Social Contribution Activities in Japan

Computer Training Sessions at Temporary Housing in Area Affected by the Great East Japan Earthquake NIFTY Corporation



ICT for Everyone



Challenges



Community Engagement

NIFTY has created a place where the Internet can be accessed at any time at an assembly hall inside temporary housing in Yamamotocho in Miyagi Prefecture. The company has also given its support to the Yamamoto ICT Community College plan and conducted computer training sessions in conjunction with the Society of Socio-Informatics. Session participants were able to, for example, access information about reconstruction plans, learn how to make greetings cards, and use social networking services to disseminate information. Local middle school students acted as instructor assistants in an effort to create a truly multigenerational exchange opportunity.

The Fujitsu Group continues to help revitalize local communities by enabling people living in temporary housing and other places of refuge to use ICT to keep in touch with friends and family in faraway places.



Computer training session held with support from local middle school students

Helping to Promote Tourism Using Open Data between Public and Private Organizations Fujitsu Systems East Limited



ICT for Everyone



Community Engagement

Recent years have seen more people traveling on their own, which has led to a greater demand for information about how to better enjoy a region and the little-known attractions it may hold, rather than just the most famous spots.

Fujitsu Systems East Limited has formed a non-commercial public/private partnership agreement with Aomori Prefecture. One aspect of the partnership involves tourism information held by public institutions being put on Fujitsu's "Tourism Cloud" as open data and being made available on Aomori Prefecture's tourism site for those looking for tour route information. As of May 2013, data has been provided to 30 tourism sites in the Prefecture as Fujitsu continues to help travelers plan their trips and to help the local communities disseminate tourism information.

Going forward, the Fujitsu Group will be further developing tourism through public/private partnership as we make the most of open data.



Tour route information service for Aomori Prefecture

Helping Resolve Issues in Communities with Participation from Local Citizens Fujitsu Limited



ICT for Everyone



Challenges



Community Engagement

Nagoya City aims to resolve local issues by improving its citizens' ability to utilize ICT and the consequent furthering of civic participation.

Fujitsu has recently taken part in the Citizen Journalist Development Project led by Nagoya City. As part of the project, Fujitsu held a Citizen Journalist Development Course where participants learned about information gathering and dissemination methods using ICT.

The advance of social networks has resulted in a dramatic rise in people's ability to gather and disseminate information, and innovation coming out of working and creating together using networks is creating new opportunities in a variety of aspects in daily life. Using ICT, Fujitsu will continue to help resolve local issues and advance peoples' skills.



Citizen Journalist Development Course

Bolstering Support for NGOs by Building the "Fundraising Management System to Support NGOs" Fujitsu Systems East Limited

The Japan NGO Center for International Cooperation (JANIC), which tackles issues involving poverty around the world, was looking to expand its operations by automating various kinds of office work conventionally done manually.

To this end, Fujitsu Systems East Limited built the "Fundraising Management System to Support NGOs" for JANIC, increasing work productivity by automating calculations and the distribution of notices and contributing to an increase in the number of JANIC's supporters.

The Fujitsu Group will continue to provide support in enhancing social contribution activities by strengthening NPOs' and NGOs' operational basis through ICT.



ICT for Everyone



Challenges



JANIC staff

Examples of Social Contribution Activities Overseas

Manpower and Technology Support in Thailand Flood Recovery Efforts Fujitsu Limited



The floods that occurred throughout Thailand in October 2011 did some 3.5 trillion yen of damage. Even in March 2012, six months after the disaster, factories were only back to 70% operational capacity. It was a major blow to life in the country and to business supply chains.

Confronting the crisis head-on, Fujitsu dispatched 14 people from Japan who had helped with recovery efforts for the Great East Japan Earthquake to reinforce 50 local field engineers already at work. We helped with maintenance and recovery at 294 companies through efforts that included providing data centers and servers free of charge to affected companies and managing the recovery status of customers' systems using cloud computing.

In the future, Fujitsu will continue to leverage the power of ICT to help get affected areas back on their feet.



Thailand during the floods

Charity Partnership with a Homeless Support Organization The UK: Fujitsu UK and Ireland



The current economic climate is increasingly forcing people to seek support and advice losing their homes. In the UK, with a 25% increase in the number of people without a stable residence over the past three years, this is truly a critical time for the housing charity.

Fujitsu has undertaken a two year partnership with the UK's leading housing and homelessness charity, Shelter. Fujitsu's support will allow Shelter to better achieve its ambitious three-year strategy, which aims to help more people in need than ever before. Fujitsu's core expertise in ICT enable us to make the partnership about more than just money, and a key objective in our joint strategy is focused on our ability to help increase the capacity of Shelter's website and helpline, as well as bringing digital capabilities to the Shelter shop network.



Celebrating at a charity event for Shelter with London's mayor

Management

We are pursuing total optimization for the Fujitsu Group by clarifying each Group company's role and position in the process of generating value for the Group as a whole and managing the Group to continuously enhance its corporate value.



Corporate Governance

We are pursuing sound and efficient management and strengthening our governance structure for putting [the Fujitsu Way](#) into practice.

Basic Stance

In order to continuously raise the Fujitsu Group's corporate value, along with pursuing management efficiency, it is also necessary to control the risks that arise from business activities. Recognizing that strengthening corporate governance is essential to achieving this, the Board of Directors has articulated the Basic Stance on Internal Control Framework, and these measures are continuously implemented.

Furthermore, by separating management oversight and operational execution functions, we aim to accelerate the decision-making process and clarify management responsibilities. Along with creating constructive tension between oversight and execution functions, we are further enhancing the transparency and effectiveness of management by proactively appointing outside directors.

With respect to Group companies, we are pursuing total optimization for the Fujitsu Group by clarifying each group company's role and position in the process of generating value for the group as a whole and managing the group to continuously enhance its corporate value.

The Framework for Strengthening Corporate Governance

Fujitsu has established Executive Nomination and Compensation Committees in order to ensure the transparency and objectivity of the process for choosing candidates for the Board of Directors and determining their compensation, and to ensure the appropriateness of the compensation system and levels. The Executive Nomination and Compensation Committees act as consultative bodies to the Board of Directors. Taking into consideration the current business climate and anticipated trends, the Executive Nomination Committee makes recommendations of candidates (draft) for the Board of Directors, choosing candidates having objectivity in making management decisions, foresight and perceptiveness, and a superior character. The Compensation Committee is tasked with making recommendations on executive salaries and methods for calculating bonuses linked to financial performance, taking into consideration compensation levels at other companies with similar business activities, business scale, and other factors. The aim of this activity is to retain superior management talent, and provide effective incentives for improving the company's financial performance. Executive compensation will be determined in accordance with the Executive Compensation Policy revised in an April 2011 meeting of the Board of Directors based on a report by the Committee.

In addition, we have adopted the processes in place, in accordance with laws and regulations, to ensure that conflicts of interest are avoided, including but not limited to obtaining approval from the Board of Directors.

[Reference] Executive Compensation Policy

To retain exceptional human resources required to manage the Fujitsu Group as a global ICT company, and to further strengthen the link between its compensation structure and business performance as well as shareholder value, while at the same time improving its transparency, the Group has established its Executive Compensation Policy as follows.

Executive compensation is comprised of the following: "Basic Compensation," specifically a fixed monthly salary in accordance with position and responsibilities; "Stock-based Compensation," which is a long-term incentive that emphasizes a connection to shareholder value; and "Bonuses" that are compensation linked to short-term business performance.

Basic Compensation

Basic compensation is provided to all directors and auditors based on position and responsibilities as compensation for duties involving business administration and the execution of corporate operations.

Stock-based Compensation

- Stock-based compensation, intended for directors responsible for executing business is a long-term performance incentive, with the amount to be paid determined based on a qualitative evaluation of medium- to long-term initiatives.
- Is provided for the purchase of Fujitsu shares, to be acquired through the Director Stock Ownership Plan. Also such acquired stock is to be held for the duration of the individual's employment.

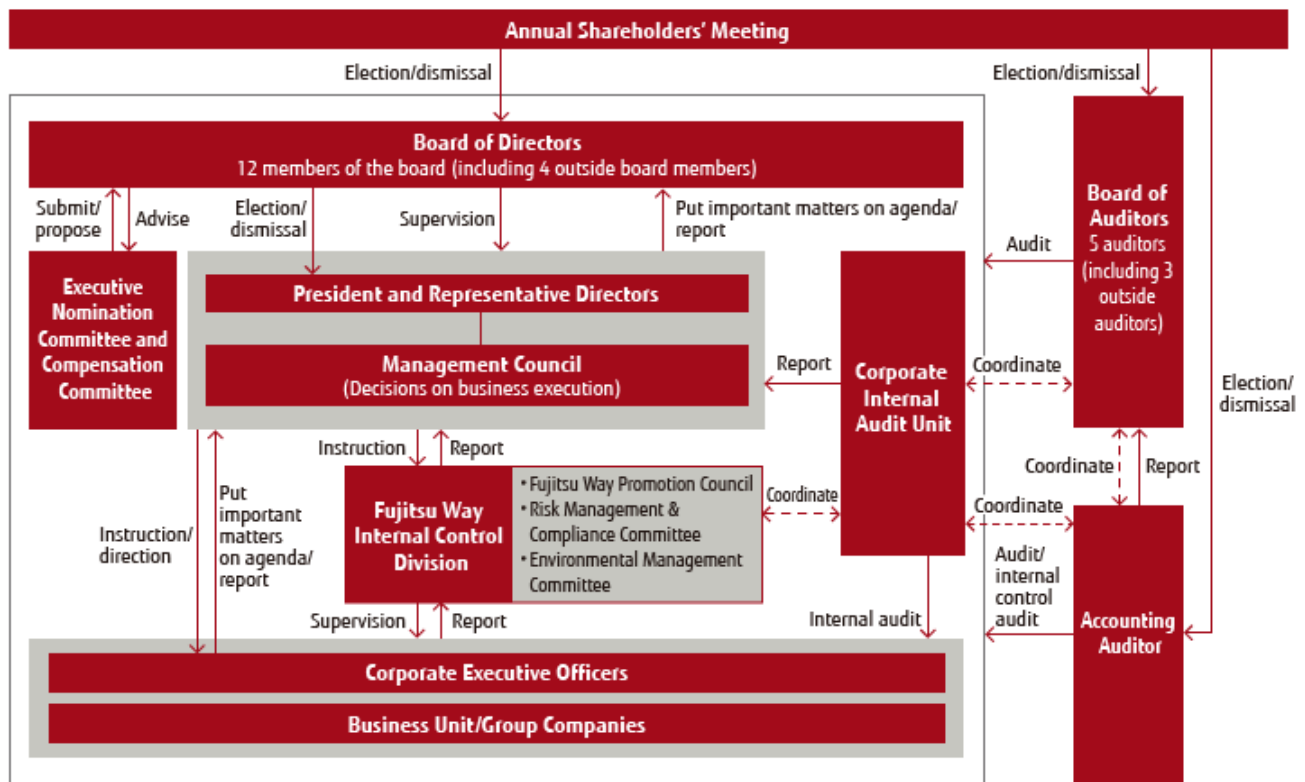
Bonuses

- Bonuses are short-term performance incentives to be paid to directors responsible for executing business. Amounts are set based on business performance in the respective fiscal year.
- As a specific method to calculate a bonus, Fujitsu will adopt a profit-sharing model which uses consolidated operating profit and consolidated net profit as indices. However, bonuses will not be paid in the event of negative net profit recorded under non-consolidated accounting for the term under review.

In accordance with the resolution of the Annual Shareholders' Meeting, the total amount of basic compensation, stock-based compensation, and bonuses shall not exceed 600 million yen per year for directors and 150 million yen per year for auditors.

(Areas of Executive Compensation and Recipients)

Recipient	Basic Compensation		Stock-based compensation	Bonuses
	Business administration portion	Business execution portion		
Directors	○	—	—	—
Directors responsible for executing business	○	○	○	○
Auditors	○		—	—



Enhancing Corporate Governance

Basic Stance

We have established the Fujitsu Way, consisting of a Corporate Vision, Corporate Values, Principles, and Code of Conduct, which guides the Group and its employees in their daily activities.

We pursue the sound and efficient execution of our business activities by striving to accelerate the penetration and implementation of the Fujitsu Way and to promote structures and procedures to ensure that business dealings are appropriate throughout the Group.

Status of Implementation

The Company, through a resolution by the Board of Directors, has adopted the following Basic Stance on Internal Control Framework (resolved on May 25, 2006, and revised on July 27, 2012). In terms of putting an internal control system in place, an organization with executive responsibility for internal control has been established. The Company is, moreover, pursuing initiatives to implement an even more robust operational execution structure by reviewing and revising its regulations and business operations. The GBS (Global Business Standards) were also established in FY 2012 to serve as a guideline for global compliance standards for the Fujitsu Group.

To accelerate the penetration and implementation of the Fujitsu Way and ensure the appropriateness of business operations, Fujitsu is promoting the implementation and evaluation of its internal control structure. This effort is led by the Fujitsu Way Promotion Council. In addition to the Fujitsu Way Promotion Council, two other groups were established and tasked with pursuing more robust and efficient business execution: the Risk Management & Compliance Committee and the Environmental Committee.

- [Risk Management & Compliance Structure](#)

The functions of each are described below.

Fujitsu Way Promotion Council

The Council promotes the embedding and implementation of the Fujitsu Way. In addition, it has also been promoting Project EAGLE, which is a Group-wide activity for building an internal control system for effective and reliable financial reporting in compliance with the Financial Instruments and Exchange Act, and by which the Group has been able to promote the implementation and evaluation of internal control. The Council has established a promotion organization dedicated to this endeavor, which covers the entire Group. Along with improving controls over financial reporting, the goals of the project also include achieving greater efficiency through the pursuit of business process reforms across the Group.

Risk Management & Compliance Committee

This committee assigns risk management and compliance executives to each Fujitsu business group and Group company in Japan and abroad and establishes a framework for managing risk and ensuring compliance throughout the entire Fujitsu Group. The committee identifies, analyzes, and evaluates risks associated with business activities based on coordination among risk management and compliance executives while establishing and reviewing measures to address these risks. It also reports on the status of serious risks to the Management Council and Board of Directors.

When a department or group company identifies a serious risk, it immediately reports it to the Risk Management & Compliance Committee. The committee then works with the relevant department to take appropriate action and resolve the issue as quickly as possible while investigating the cause, establishing and carrying out measures to prevent recurrence, and reporting to the Management Council and Board of Directors when necessary.

Also, in connection with the Code of Conduct outlined in the Fujitsu Way, the helpline system has been established for employees to report and seek advice about work situations they are unsure of how to handle.

- [Risk Management Process](#)

Environmental Management Committee

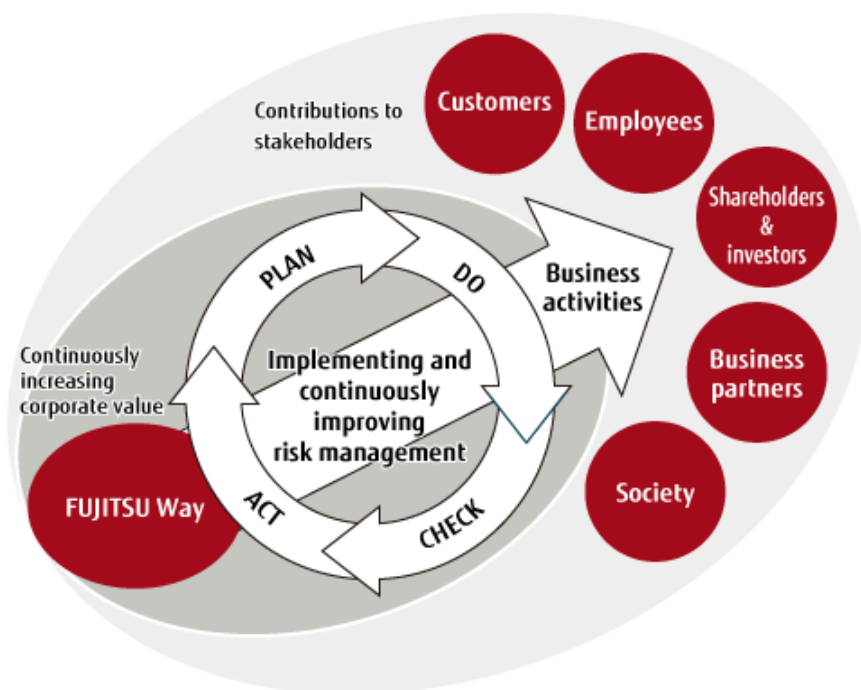
This committee is responsible for promoting the environmental protection activities of the Fujitsu Group, which are based on the Fujitsu Group Environmental Policy and the Fujitsu Group Environmental Protection Program.

For further details, please refer to the following document.

-  [Corporate Governance \(Fujitsu Limited Annual Report 2013, pp. 078-090\)](#) [324KB / 13 pages]

Risk Management

Through its global activities in the ICT industry, the Fujitsu Group continuously seeks to increase its corporate value, and to contribute to its customers, local communities and indeed all stakeholders. Properly assessing and dealing with the risks that threaten the achievement of our objectives, taking steps to prevent the occurrence of these risk events, and establishing measures to minimize the impact of such events if they do occur and to prevent their reoccurrence are assigned a high priority by management. Moreover, we have built a risk management and compliance system for the entire Group and are committed to its continuous implementation and improvement.



Business Risks

The Group identifies, analyzes and evaluates the risks that accompany business activities and works on measures to avoid or reduce them, and to deal with them quickly in the unlikely event that they materialize.

Examples of Business Risks^{*1}

- Economic and financial market trends
- Changes in customers' ICT investment trends and being unable to maintain lasting ties with customers
- Competitors' strategies and industry trends
- Procurement, alliances and technology licensing
- Public regulations, public policy and tax matters
- Deficiencies or defects in products and services, information security, project management, investment decisions, intellectual property rights, human resources, environmental pollution, credit risks, etc.
- Natural disasters and unforeseen incidents

^{*1}:

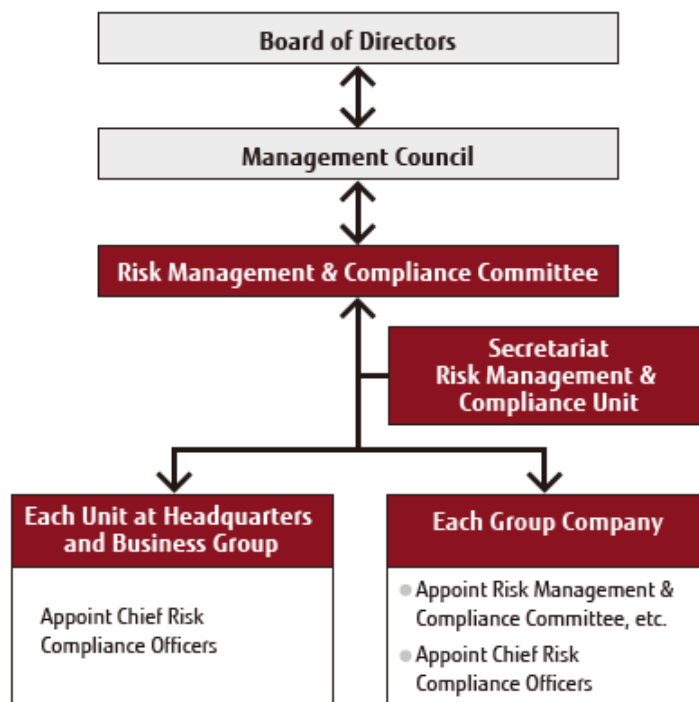
These are just some of the risks of doing business. More detailed risk-related information can be found in our earnings report, securities reports and other published reports.

Risk Management & Compliance Structure

In July 2012, the Fujitsu Group merged the former Risk Management Committee and Compliance Committee to form a new Risk Management & Compliance Committee with the aim of integrating and strengthening its global risk management and compliance structures.

The Risk Management & Compliance Committee appoints a Chief Risk Compliance Officer for each department and company throughout the Group, and encourages cooperation among them to both guard against potential risks and mitigate risks that materialize, forming a risk management and compliance structure for the entire Group.

Risk Management



The Risk Management Framework

The Risk Management & Compliance Committee is responsible for grasping the status of risk management and compliance in all Fujitsu business groups and Group companies in Japan and overseas, establishing the appropriate policies and processes, etc., and both implementing and continuously improving them. In practical terms, it decides on risk management regulations and guidelines, applies them and regularly reviews and improves them.

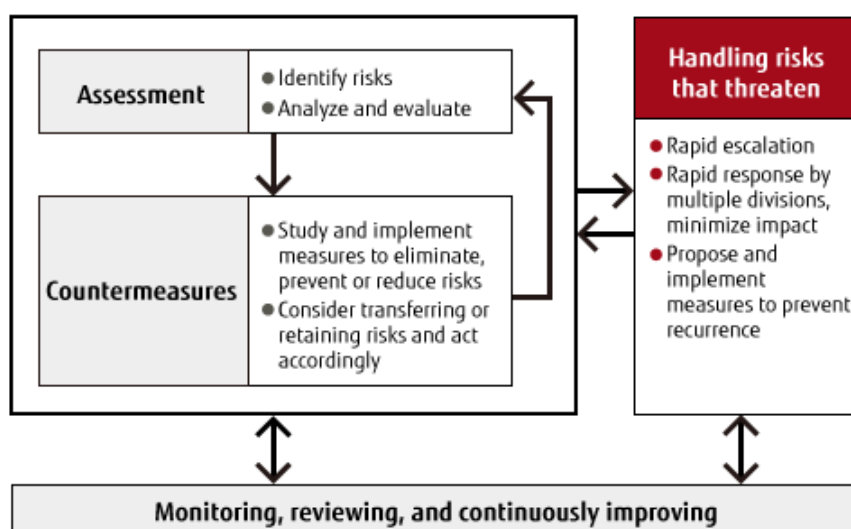


Risk Management Processes

The Risk Management & Compliance Committee, which maintains regular communications with Chief Risk Compliance Officers, identifies, analyzes and evaluates the risks of business activities, confirms the detailed measures intended to deal with major risks by averting, minimizing, transferring or retaining them. It also reports important risks to the Management Council.

The Risk Management Committee also prepares responses against the actual materialization of a risk despite the implementation of various preventive measures. If a critical risk such as a natural disaster, product breakdown or defect, a problem with a system or service, a compliance violation, an information security breach, or an environmental problem materializes, the department or Group company reports immediately to the Risk Management & Compliance Committee. The Risk Management & Compliance Committee coordinates with the related divisions and workplaces for rapid resolution of the problem by appropriate measures such as establishing a task force. At the same time, the Risk Management Committee strives to identify the causes of the problem and propose and implement solutions. Additionally, for critical risks, the committee also reports as appropriate to the Management Council and the Board of Directors.

The Risk Management & Compliance Committee continuously confirms the implementation status of these processes and works to make improvements.



Group-Wide Disaster Preparedness

To build a robust disaster-preparedness network and enhance our business continuity response capabilities, the Fujitsu Group has created a Group-wide disaster-preparedness organization, assuming a major disaster. In Japan, we have been carrying out annual nation-wide disaster-response drills in conjunction with Disaster Preparedness Day on September 1st.

FY 2012 marks the 18th year of systematically conducting training for an earthquake occurring under Tokyo or in the Tonankai region. This year we completed training at 87 companies (236 sites), including Fujitsu Headquarters. At Fujitsu, we collaborated with the Miyazaki Prefectural government, a Fujitsu client, to conduct disaster response training that included the restoration of network systems. We also conducted training focused on business continuity in the event of a disaster at Shimane Fujitsu Limited, a major Fujitsu notebook PC manufacturer. Sites around Japan also carried out initial response training centered on confirming employee safety and checking for damage to work-related buildings immediately after a disaster.

Disaster-preparedness self checks are autonomously conducted throughout the Group based on inspection criteria established at each site as an activity to minimize personal injury and property damage in the event of a disaster. Based on the results of these checks for FY 2012, which found that many sites see heightening awareness of DRP (disaster response plans) and disaster response procedure training as areas needing more attention, we will be sharing effective training methods as we continue to conduct disaster-preparedness self checks in FY 2013.

Teams made up of internal departments for environmental management, facility management, and risk management have been formed and visit facilities that are critical to Fujitsu business continuity, ensuring that laws are being upheld, while also conducting joint testing throughout the Fujitsu Group in order to prevent accidents that could arise from aging infrastructure or from fires and other natural disasters. The teams are also responsible for everything from verifying inspection results to providing guidance on establishing measures to make improvements to checking on the progress of such endeavors. Based on the results of joint testing conducted at 30 facilities from FY 2010 to 2012, we will be sharing good practices and cases of improvements made regarding disaster preparedness with all facilities in the Group.

Business Continuity Management

The risks of unforeseen events that threaten economic and social continuity, such as natural disasters like earthquakes and large-scale flooding, disruptive incidents, accidents, and pandemics such as the new strain of influenza, have increased greatly in recent years.

To ensure that even when such risks occur, we can continue to provide a stable supply of the high-performance, high-quality products and services our customers need, the Fujitsu Group has established a Business Continuity Plan (BCP), and promotes Business Continuity Management (BCM) as a way of continuously reviewing and improving that BCP. Through the BCM process, the lessons learned in the course of the Great East Japan Earthquake and the flooding in Thailand are now reflected in our BCP.

FY 2012 saw us make continuous efforts towards establishing precautions to ensure a stable supply of products and services, strengthen our alternative production capabilities both overseas and in Japan by creating multi-fab facilities consisting of at least two mass production plants, increase the number of suppliers we purchase parts from, and add redundancy to internal systems.

We also provided support for our suppliers' BCM evaluations and their improvement, while also dedicating ourselves to making supply chain risks visible. As one example of this, we use the SCRKeeper^{*2} risk management system to clarify the scope of impact risks have on the supply chain. Our executives also continued to take part in training sessions.

Going forward, the Fujitsu Group will be systematically developing specialists in order to further promote, implement, and improve BCM. In FY 2012, BCM specialists from each department took part in training to better understand BCP for their own department and learn how to conduct actual BCM activities. Our plan now is to move forward with BCM throughout the entire supply chain, not just our logistics and production supply chains, with efforts that include providing support for BCM system creation for our suppliers, with our specialists playing a central role.

^{*2} SCRKeeper:

A supply chain risk management service developed by the Fujitsu Group, the distribution of which began in FY 2013. It enables the evaluation and analysis of business partners' business continuity capability and predicts and assesses potential damage to their location of business on an individual-disaster level.

Measures Against New Strains of Influenza

We have taken steps against new strains of influenza based on a three-fold influenza policy- to safeguard lives, to stop the spread of infection, and to ensure business continuity. We created a "Pandemic influenza Preparedness Action Plan " that stipulates preventive measures in everyday operations and the response process to be used if an outbreak occurs. We work to disseminate these to all employees through e-Learning and by distributing pamphlets. Also, to contribute to the continuity of social infrastructure businesses and the continuity of our customers' businesses should a pandemic occur or a particularly virulent new strain of influenza arise, we have established, and carry out training based on, a "Business Continuity Action Plan for Measures Against Pandemic influenza."

In FY 2012 we also reviewed the "Pandemic influenza Preparedness Action Plan " for the Fujitsu Group based on the government's revisions to the "Pandemic Influenza Preparedness Action Plan" and promulgation of the "Special Measures Act to Counter New Types of Influenza" in May 2012.

Risk Management Education

We developed and operate a systematic educational curriculum that aims for extensive risk management across the entire Group.

Through this curriculum, we inform our employees of our basic approach to risk management and the rules to be followed, and cite concrete examples to strengthen our employees' awareness of risk management and their ability to deal with risks. We also hold education and training programs as appropriate on issues such as information security, environmental problems, and natural disasters.

Compliance

We are ensuring thorough compliance in line with the Code of Conduct of [the Fujitsu Way](#).

Activities Promoting Compliance

Under our top management's commitment, the Fujitsu Group engages in various activities to ensure widespread awareness of the need for compliance.

In FY 2012, as a set of standards for Fujitsu Group global compliance, we fleshed out the Code of Conduct in the Fujitsu Way then put together the GBS (Global Business Standards), a set of guidelines that even incorporates a guide for individual employee behavior. These guidelines were uniformly put into practice throughout the Group in January 2013.

In Japan, we have put in place a range of internal company rules that include Fujitsu Group rules deemed necessary for building a governance structure throughout the Group. We are also disseminating information to Fujitsu and Group company employees about major legislation closely connected to our business (the Antimonopoly Act, the Unfair Competition Prevention Act, Act against Delay in Payment of Subcontract Proceeds, Etc. to Subcontractors, etc.) through easy-to-follow compliance manuals posted on the intranet. Furthermore, we have established a special internal hotline for consultation on and reporting of matters related to the Antimonopoly Act.

Besides Japanese laws, we have also prepared a compliance manual on the U.S. Export Administration Regulations (EAR), which are closely connected to our global business development activities. Efforts are focused on ensuring familiarity with this manual among employees. Overseas, the GBS has been codified into rules at each Group company. At the same time, we use e-mail and the Internet to ensure that employees understand these rules.

-  [GBS \(Global Business Standards\)](#)

Compliance education

The Fujitsu Group provides a range of compliance training to all employees to ensure legal compliance.

In FY 2012, we began offering the "Carrying Out the Code of Conduct" e-Learning course at Group companies in Japan. This is an expansion of the initiatives conducted for all Fujitsu employees in FY 2011, and focuses on issues like harassment and problems like bribery, which can greatly harm the company. The course provides an opportunity for each employee to review and correct their actions. At overseas Group companies, we also implemented e-Learning courses covering areas such as the GBS and corruption prevention in FY2012.

In addition to compliance training for executives, which is provided by outside lawyers, we also conduct in-house training for heads of sales divisions and branches covering bidding-related laws and the Antimonopoly Act. For new managers, we also regularly hold in-house training where a Fujitsu instructor explains the importance of the Code of Conduct and compliance, while also providing case studies of typical scenarios and situations whose optimal handling may not be clear.

Along with continuing the activities above, in 2013 we will be further enhancing our group training efforts focused on areas such as cartels and bribery for high-risk departments in Japan and abroad.

Furthermore, we have been printing the Code of Conduct of the Fujitsu Way on wallet-size cards and have been distributing them to all Group employees. These cards are designed to serve as a quick reference of the Code of Conduct for employees when they are dealing with customers or business partners, or when they are uncertain about a decision in the course of daily operations. The foreign-language card, which includes three languages, is distributed to non-Japanese employees.



Wallet-size card

Operating an Internal Reporting System

Helpline

Since September 2004, we have been operating an internal helpline system to handle reports and provide consultations for all Group employees (including seconded, contracted, part-time or other short-term employees as well as temporary staff).

This helpline is intended for use by employees who are uncertain about a decision or suspect a violation in the course of executing daily business operations, based on the Code of Conduct set forth by the Fujitsu Way.

Each of the Group companies in Japan and overseas has also established and operates its own internal reporting system.

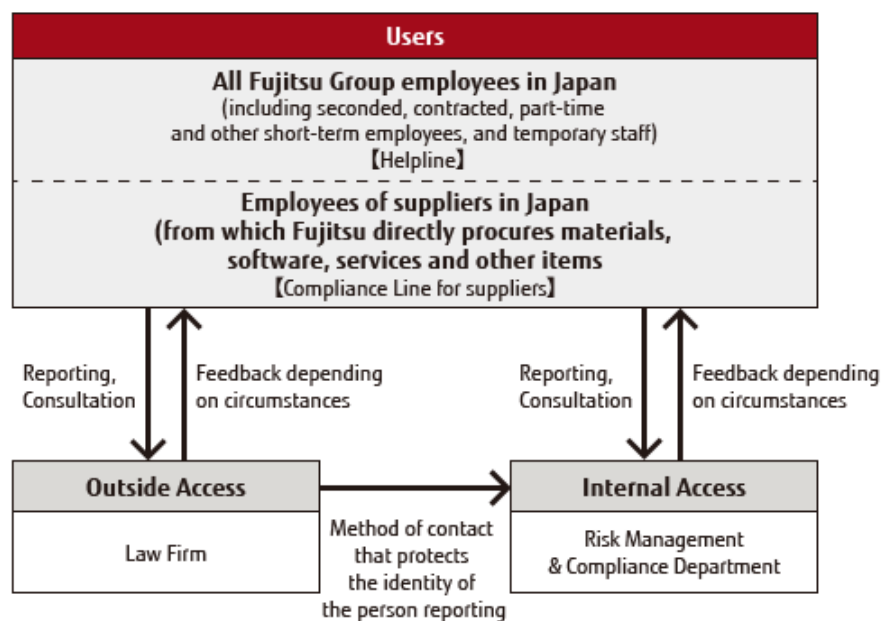
Compliance line for suppliers

In August 2009 the existing helpline system was extended by a compliance line for suppliers to handle reports and inquiries directly from the employees of companies that supply Fujitsu with products, services or software, etc.

With our helpline and compliance line for suppliers, the system forbids any and all sanctions against employees and suppliers for making such reports, and meticulous care is taken in handling the information so as to preserve their anonymity.

If problems are found in investigating these reports, the relevant practice is terminated and measures are taken to prevent recurrence.

Internal Reporting System for Suppliers



Information Security

We are ensuring the proper management and use of information, in line with internal rules based on the Code of Conduct in the Fujitsu Way.

Our Basic Approach to Information Security

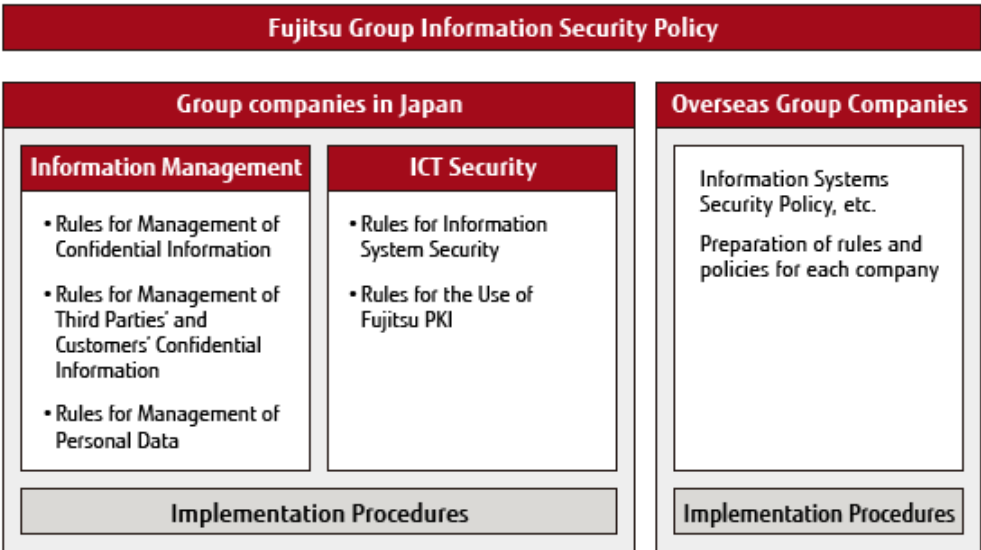
We see maintaining confidentiality as a vital aspect of our social responsibility. Based on this approach, we have established the Fujitsu Group Information Security Policy, consistent throughout the world, and are promoting information security in accordance with the policy.

We have also established a special team to respond to targeted email and various other types of cyber attacks. Working with governmental and other partners, the team addresses these attacks with the aims of detecting and defeating them as early as possible.

-  [Fujitsu Group Information Security Policy](#) [24KB]

Our framework of information security rules

Each Group company codifies related rules in accordance with the Fujitsu Group Information Security Policy, and implements information security measures.



* PKI (Public Key Infrastructure): Rules relating to the use of systems for personal identification and encoding.

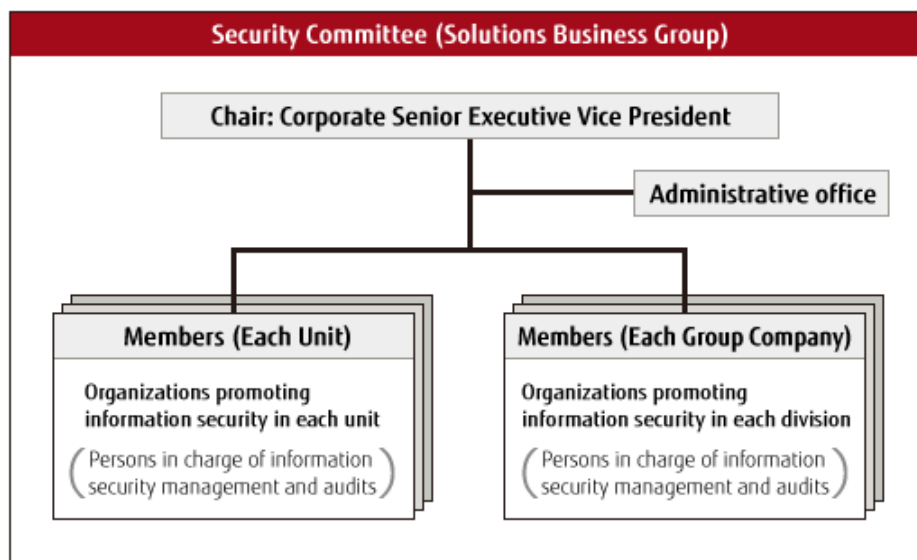
Strengthening Information Security at the Business Group Level

To assure the strongest possible information security management, we are working to implement a security management structure.

The Group operates in a wide variety of industries and is promoting individual businesses by organizing them into business groups. Information security measures are implemented to reflect the individual characteristics of each business.

A number of business units at Fujitsu and some domestic Group companies have acquired ISMS (Information Security Management System) certification and are working to provide thorough management of confidential information including customers' information.

Information Security Management Structure



Teaching and promoting awareness of information security

Starting in FY 2008, using a common slogan that translates as "Declaration for complete information management! Information management is the lifeline of the Fujitsu Group," Fujitsu and domestic Group companies have been working to increase information security awareness at the individual employee level by displaying posters at respective business locations, affixing information security awareness stickers to all business PCs used by employees, and other measures.

We have also taken steps to enhance security through the application of ICT, such as by introducing a remote data deletion solution (CLEARSURE) and a mail checker tool (SHieldMailChecker) to prevent e-mail from being sent externally in error.

Furthermore, e-learning courses are held for all our employees, including executives, each year in order to further establish information security awareness.



Held information security presentation for business partners

As a result of dramatic change in the ICT environment in recent years, the risk of information leaks has never been higher. In response, the Fujitsu Group has held information security presentations that were not only for Group employees but also for domestic business partners who commission software development and services.

- [Example of seminars held in FY 2012](#)

Personal Data Protection Initiatives

We have stipulated a Personal Data Protection Policy and Rules for Management of Personal Data in accordance with Japan's Act on the Protection of Personal Information. Based on these rules, we give education on how private information should be handled and carry out surveys in an ongoing effort to strengthen the protection given.



In August 2007, we acquired company-wide PrivacyMark certification and have since been renewing this certification every two years. Domestic Group companies are also acquiring PrivacyMark certification individually as necessary, and promoting thoroughgoing management of personal data. Overseas Group companies are also publishing privacy policies that meet their various national legal and social requirements on their main public Internet websites.

Protection of Intellectual Property

We are appropriately managing intellectual property rights (respect/protection) in all aspects of our business activities.

Our Basic Approach Toward Intellectual Property

The FUJITSU Way code of conduct clearly states that "We protect and respect intellectual property."

In line with this statement, all Fujitsu Group employees recognize intellectual property as an important business asset that supports Group activities and gives our customers a sense of safety and trust in the Group as their partner, so employees are required to keep this constantly in mind as they perform their duties.

We established an internal rule in order to encourage the proper handling of intellectual property in October 1995. This rule not only specifies what all employees should do to acquire, maintain and use intellectual property rights, but also directs them to respect those of other companies.

Respecting Intellectual Property

The Group regards any infringement of intellectual property rights by its products and services as a serious defect. Accordingly, to avoid infringing other companies' patents, we conduct thorough searches of their patents at the initial stages of research and development and prior to putting the products or services onto a market.

We protect our business by dealing resolutely and swiftly with any and all infringements of Fujitsu's rights, and at the same time we respect others' rights, as mentioned above.

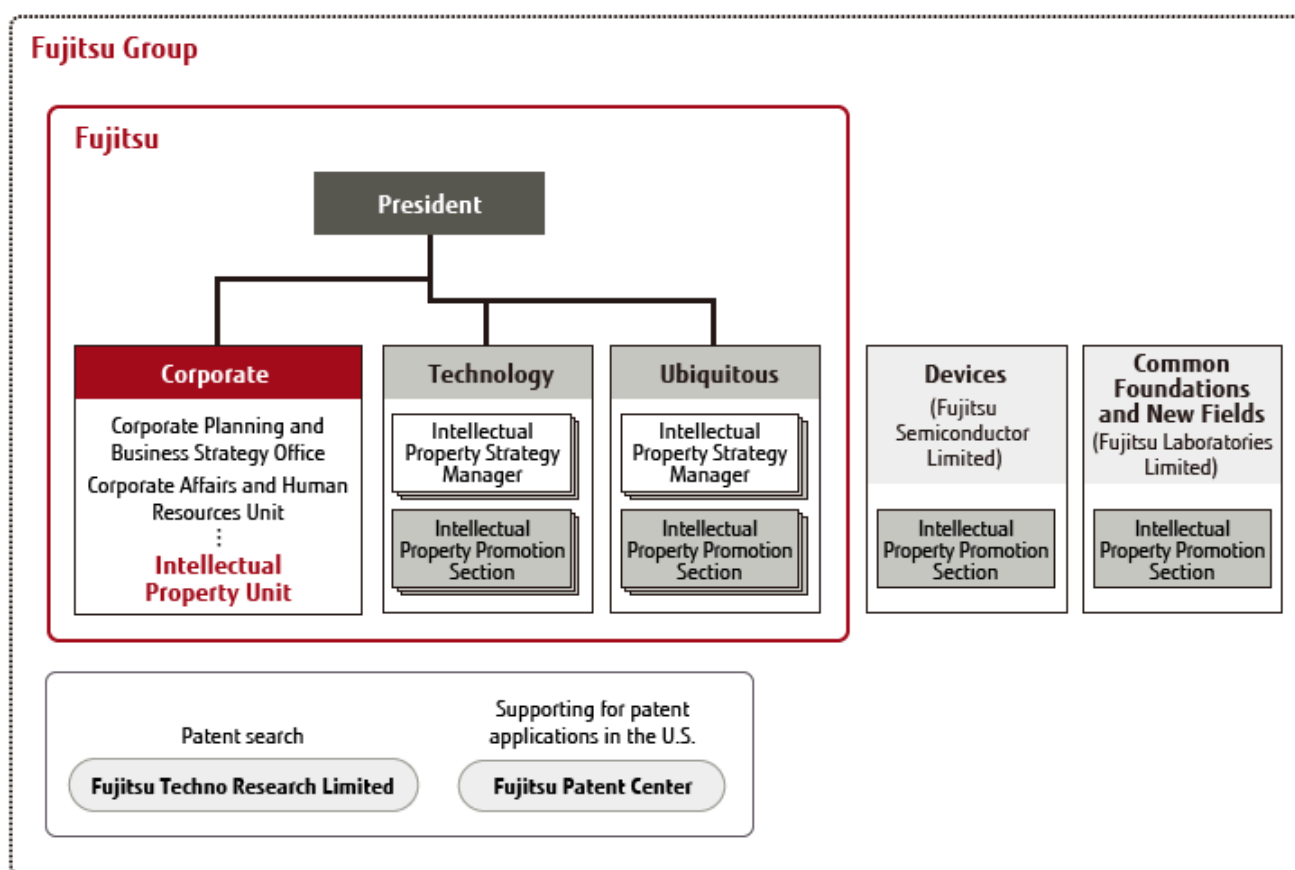
Organizations and Frameworks to Protect Intellectual Property Rights

Fujitsu established Intellectual Property Unit as one of its corporate centers. The Intellectual Property Unit deals with any activities relating to intellectual property, in areas ranging from the development and planning of the intellectual property strategies of the Fujitsu Group to the utilization of intellectual property, including licensing of intellectual property rights. It is also promoting strategic standardization activities for creating international standards, so that everyone can take advantage of convenient services and use our products at ease.

The Intellectual Property Unit also takes the initiative in activities relating to the intellectual property of the entire Fujitsu Group. In each business group, an intellectual property strategy manager is appointed and assures seamless cooperation between the research and development sections and the intellectual property sections.

To promote efficient global business operations, the Fujitsu Group is making efforts to appropriately acquire, maintain, and utilize its intellectual property throughout the world. In particular, Fujitsu Group resident offices are located in China to ensure that all inventions produced as a result of efforts made in our research and development sites in those countries are identified without fail, and to promote applications for patents for those inventions. Furthermore, in the U.S., the Fujitsu Patent Center we established in April of 2008 in an effort to improve our ability to acquire patent rights is expanding its activities to improve the quality of our patents.

ORGANIZATION



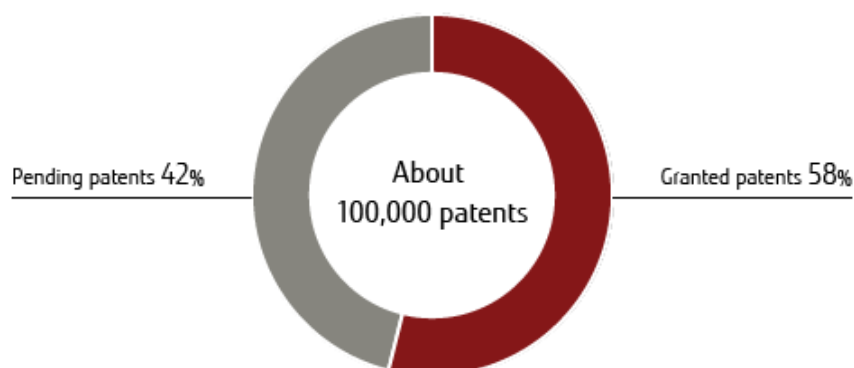
Intellectual Property Education and Enlightenment

Fujitsu Group places importance on the employee education required to implement our intellectual property strategy. We believe that it is vitally important to foster our employees' awareness of the importance of intellectual property and to encourage them to integrate business, research and development, standardization, and intellectual property strategies when performing their activities. As part of our efforts to this end, we are developing a training system for increasing awareness of intellectual property, while offering a large number of training programs to ensure effective and efficient training to fulfill the needs of individual employees in their respective careers, thereby providing strategic employee education. We provide two types of training programs, e-learning and classroom education, so that employees can select the type suitable for their purposes and conditions.

Patent Portfolio Status

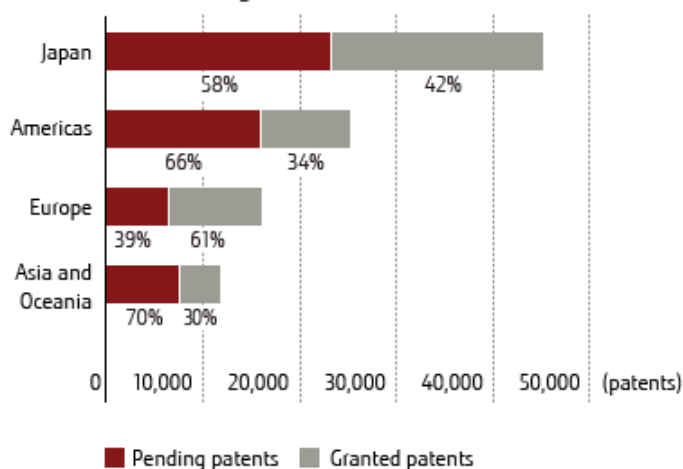
The Fujitsu Group holds roughly 100,000 patents worldwide as of March 31, 2013.

Fujitsu Group's Pending and Granted Patents Worldwide



As our business has become more global, our overseas patents have come to outnumber our domestic patents. The Fujitsu Group is striving to enhance patent portfolios by aggressively filing patent applications and acquiring patent rights globally, as well as by identifying inventions born from overseas research and development sites in places like the US, Europe, and China.

Breakdown of Granted and Pending Patents for Each Region



As of March 31, 2013

Source: Fujitsu internal statistical information

With respect to patent position, Fujitsu ranked 7th in Japan (based on our own research) and 11th in the US (based on IFI CLAIMS Patent Services research) in 2012 in terms of the number of patents registered. The Fujitsu Group's registered patents total 4,681 in Japan and 2,124 in the US.

Number of Granted Patents in Japan in 2012

		(patents)
1	Panasonic Corporation	8,146
2	TOYOTA MOTOR CORPORATION	5,321
3	Canon Inc.	5,023
4	Mitsubishi Electric Corporation	4,497
5	TOSHIBA CORPORATION	4,493
6	Ricoh Company, Ltd.	3,556
7	FUJITSU LIMITED	3,258
8	Honda Motor Co., Ltd.	3,182
9	Sharp Corporation	3,023
10	Hitachi, Ltd.	2,958
11	Sony Corporation	2,901
12	Denso Corporation	2,834
13	SEIKO EPSON CORPORATION	2,734
14	NEC Corporation	2,319
15	FUJIFILM Corporation	2,296
16	Fuji Xerox Co., Ltd.	1,987
17	Dai Nippon Printing Co., Ltd.	1,955
18	BROTHER INDUSTRIES, LTD.	1,714
19	KYOCERA Corporation	1,713
20	NIPPON TELEGRAPH AND TELEPHONE CORPORATION	1,664

All applicants were counted on the Patent Grant Issuance date.

Source: Fujitsu survey based on Japan Patent Office data

The number of patents granted to Fujitsu Group companies other than Fujitsu Limited is 1,423 (22 companies).

Total Fujitsu Group patents: 4,681

Number of Granted Patents in the U.S. in 2012

(patents)

1	IBM Corporation	6,478
2	Samsung Electronics Co., Ltd.	5,081
3	Canon Inc.	3,174
4	Sony Corporation	3,032
5	Panasonic Corporation	2,769
6	Microsoft Corporation	2,613
7	TOSHIBA CORPORATION	2,447
8	Hon Hai Precision Industry Co., Ltd.	2,013
9	General Electric Company	1,652
10	LG Electronics, Inc.	1,624
11	FUJITSU LIMITED	1,535
12	SEIKO EPSON CORPORATION	1,461
13	Hitachi, Ltd.	1,436
14	Ricoh Company, Ltd.	1,410
15	Hewlett-Packard Development Company, L.P.	1,394
16	GM Global Technology	1,377
17	QUALCOMM	1,292
18	Intel Corporation	1,290
19	TOYOTA MOTOR CORPORATION	1,285
20	BROADCOM	1,157

All applicants were counted on the Patent Grants Issuance date.

Source: IFI CLAIMS Patent Services data

The number of patents granted to Fujitsu Group companies other than Fujitsu Limited is 589 (15 companies).

Total Fujitsu Group patents: 2,124

Intellectual Property Reports

In the interest of being thorough in disclosing activities involving intellectual property throughout the Fujitsu Group, we have been issuing annual intellectual property reports since 2006. These reports contain a wealth of information that ranges from the aims and roles of Fujitsu intellectual property strategies to initiatives and statistics.

-  [Intellectual Property Report](#) [4.84MB / A4 / 21 pages]

Innovation Management

Fujitsu Group, believing in the infinite possibilities of technology, strongly engages in (rise top the challenge of) the development of advanced new technologies and continues to create new value through ICT innovation (Information and Communication technology).

Creating business and social innovation through ICT

As Fujitsu Group's fundamental policy, we pursue the creation of new value for our customers by contributing to the construction of a highly-secure and comfortable networked society, and the realization of the prosperous future people throughout the world dream of. Our mission is to create continuous innovation for the growth of our existing businesses and the development of new businesses, while promoting research and development of advanced ICT technologies in a multitude of fields, including next-generation solutions, services and systems, networks, various electronic devices and advanced materials. Fujitsu Laboratories Ltd. undertakes the creation of innovation providing advanced research and development technologies to Fujitsu Group.

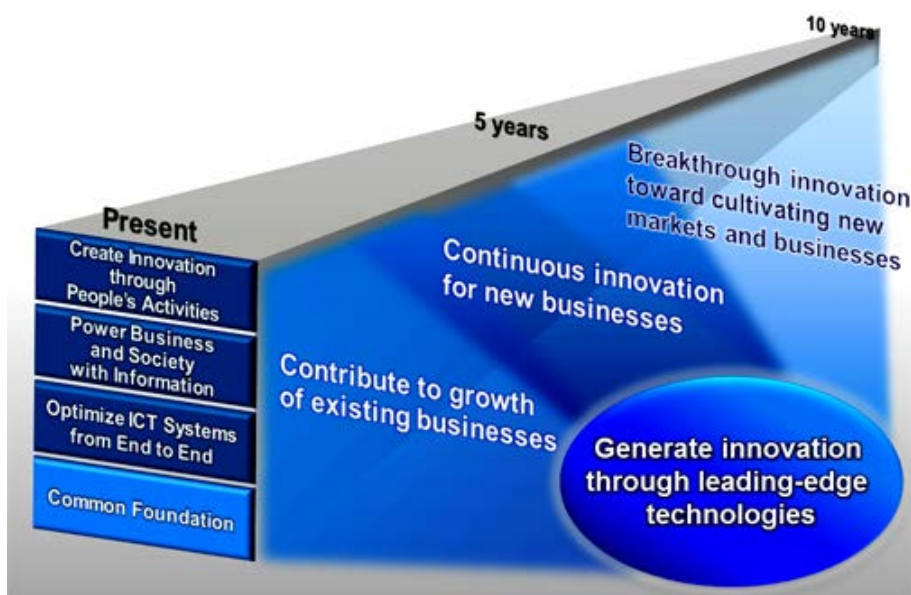
Fujitsu's basic approach to innovation management

Our vision - the Human Centric Intelligent Society - is a world where people and organizations are free to achieve their full potential and instinctively feel secure and in control, a world where knowledge is continually harnessed to drive new value and support sustainable growth.

To build this world, Fujitsu is pursuing three actions: 1) Create innovation through people's activities, 2) Power business and society with information, and 3) Optimize ICT systems from end to end. We also conduct R&D activities focused on cutting-edge technologies that support a common infrastructure.

Fujitsu is pursuing research and development in advanced technologies, aiming to contribute to the growth of our existing businesses in the short term, continuous innovation for new businesses in the medium term, and cultivation of new markets and businesses in the long term.

Mission



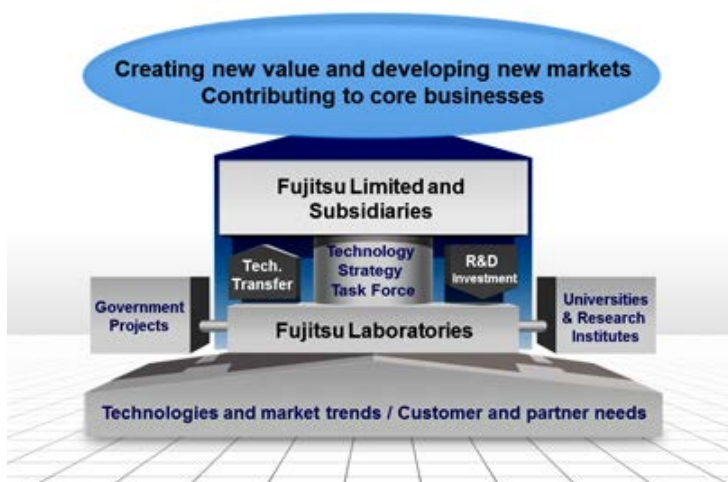
Initiatives for creating innovation

Fujitsu Laboratories, the center of research and development for the Fujitsu Group, executes research and development with investment from Fujitsu's business divisions and affiliates within the Fujitsu Group.

Fujitsu Laboratories and the Fujitsu Group have also established the Technology Strategy Task Force with select members. This task force undertakes the creation of innovation by discussing the path that the Group should take in the medium to long term and synchronizes the aims of research and business, while at the same time promoting vertical coordination of business divisions with research and development divisions, horizontal coordination of different business areas, and coordination at the Group-wide level. In addition, Fujitsu Laboratories carries out research and development in its broader network by promoting open innovation through participation in joint projects with universities and research institutions in Japan and overseas, and in national projects as well. To create innovation for new markets and businesses, Fujitsu Laboratories has established a dedicated department to promote research and development for enhancing cooperation among Fujitsu Laboratories and the Fujitsu Group, strategy formulation, and management of research project launches.

- [Web site of FUJITSU LABORATORIES LTD. for English version](#)

Research and development scheme

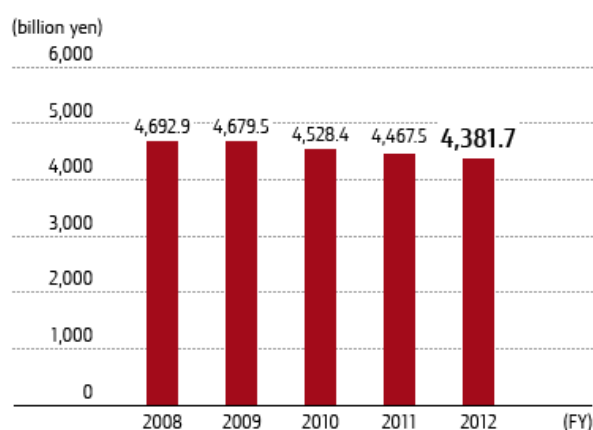


Fujitsu Group Profile (as of March 31, 2013)

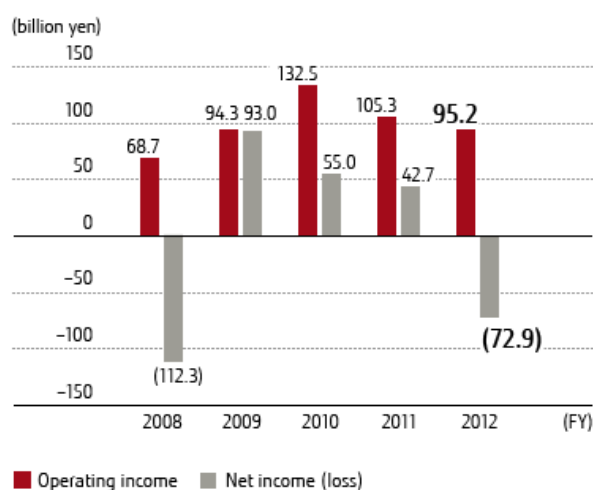
Profile

Company Name	Fujitsu Limited
Addresses	<p>Kawasaki Main Office 4-1-1 Kamikodanaka, Nakahara-ku, Kawasaki-shi, Kanagawa 211-8588, Japan</p> <p>Headquarters Shiodome City Center 1-5-2 Higashi-Shimbashi, Minato-ku, Tokyo 105-7123, Japan</p>
President	Masami Yamamoto
Established	June 20, 1935
Main Business Activities	Manufacture and sale of communications systems, information processing systems, and electronic devices, and the provision of services related to those products
Sales	¥4,381.7 billion (FY 2012)
Capital	¥324.6 billion
Total Assets	<p>¥3,049.1 billion</p> <p>(Liabilities: ¥2,139.2 billion, net assets: ¥909.9 billion)</p>
Fiscal Year-end	March 31
Employees	<p>Consolidated: 168,733</p> <p>Unconsolidated: 25,363</p>
Directors	12 (incl. 1 female director, out of 4 outside directors as of June 24, 2013)
Consolidated Subsidiaries	514 companies
Equity-method Affiliates	26 companies
Stock Exchange Listings	Tokyo, Osaka, Nagoya, London

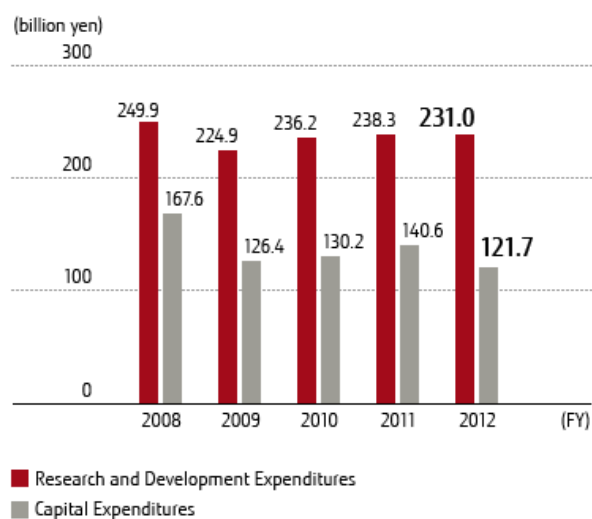
Consolidated Net Sales



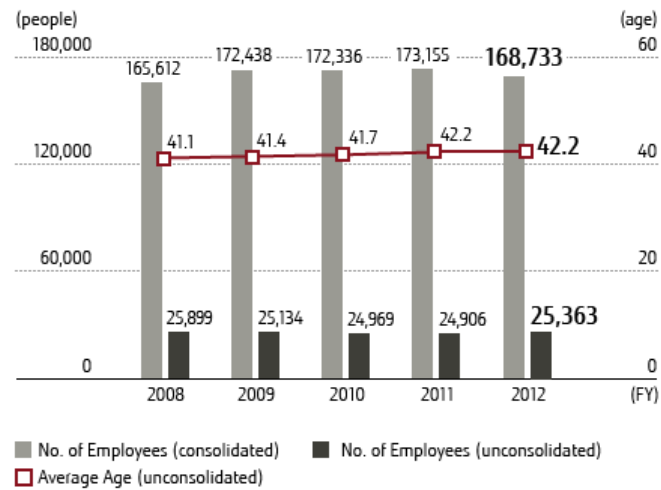
Consolidated Operating Income/Net Income (Loss)



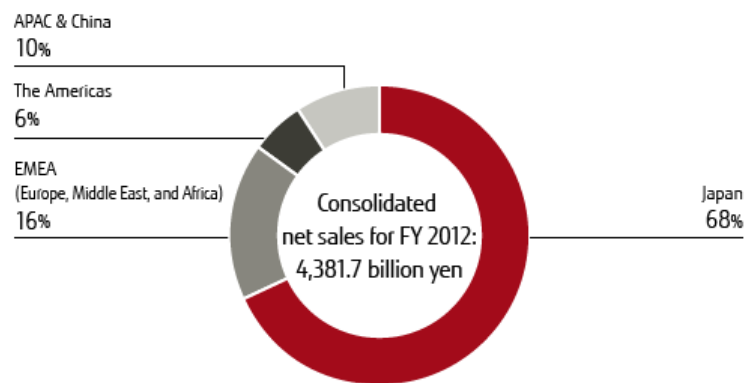
Research and Development Expenditures/Capital Expenditures



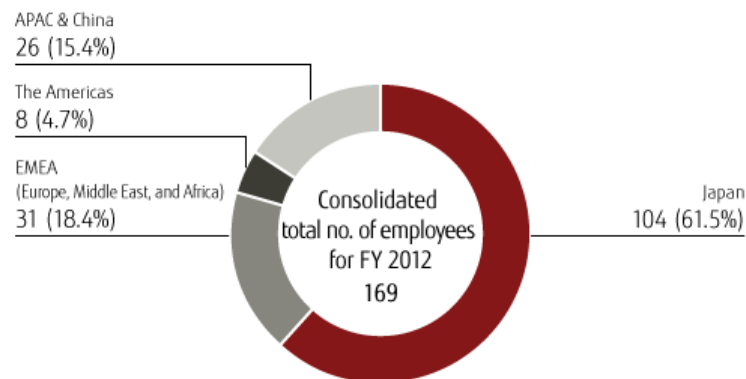
Trends in Numbers and Average Ages of Employees



Sales Ratios by Region



Employees by Region (unit: 000)

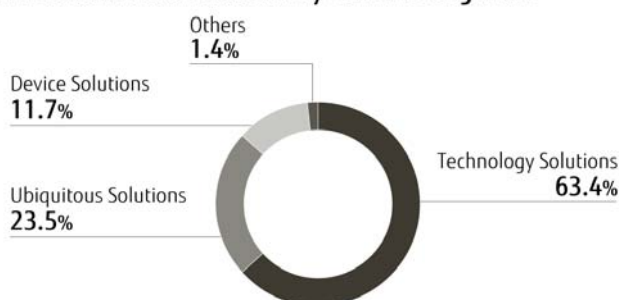


Main Business Activities

Regarding Our Business Segments

The Fujitsu Group provides a wide range of services and products with the advanced technology, high performance and high quality essential for the future of the ICT sector, and operates an integrated total solutions business, from the development, manufacture and sale of those products and electronic devices to the provision of maintenance services.

FY2012 Consolidated Net Sales by Business Segment



Technology Solutions

The Technology Solutions segment provides corporate customers around the globe with IT-driven business solutions based on our advanced technology and high-quality system platforms and services.



Fujitsu M10
UNIX Server



Fujitsu Trusted Cloud Square

Main consolidated subsidiaries

- | | | |
|---|-------------------------------|---|
| •Fujitsu Frontech Limited | •Fujitsu Systems West Limited | •Fujitsu Network Communications, Inc. |
| •Fujitsu Telecom Networks Limited | •Fujitsu FIP Corporation | •Fujitsu Services Holdings PLC |
| •Fujitsu IT Products Limited | •NIFTY Corporation | •Fujitsu America, Inc. |
| •Fujitsu Broad Solution & Consulting Inc. | •Fujitsu FSAS Inc. | •Fujitsu Australia Limited |
| •Fujitsu Marketing Limited | •PFU Limited | •Fujitsu Technology Solutions (Holding) |
| •Fujitsu Systems East Limited | | B.V., others |

Ubiquitous Solutions

The Ubiquitous Solutions segment is involved in the development, manufacture and sale of PCs and mobile phones, as well as audio and navigation equipment and other types of mobilewear.



ARROWS Tab Wi-Fi



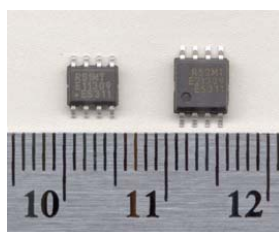
ARROWS NX F-06E

Main consolidated subsidiaries

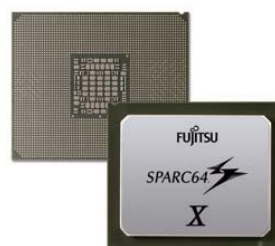
- Shimane Fujitsu Limited
- Fujitsu Mobile Communications Limited
- Fujitsu Personal System Limited
- Fujitsu Isotec Limited
- Fujitsu Peripherals Limited
- Fujitsu Technology Solutions (Holding) B.V., others
- Fujitsu Mobile-phone Products Limited
- Fujitsu TEN Limited

Device Solutions

The Device Solutions segment provides LSI devices for digital consumer electronics, automobiles, mobile phones and servers, as well as semiconductor packages and other electronic components. The segment also offers structural components, such as batteries, relays and connectors.



MBBSRS1MT/MB85SR2MT
High-capacity 1M/2Mbit
FRAM with SPI serial interface

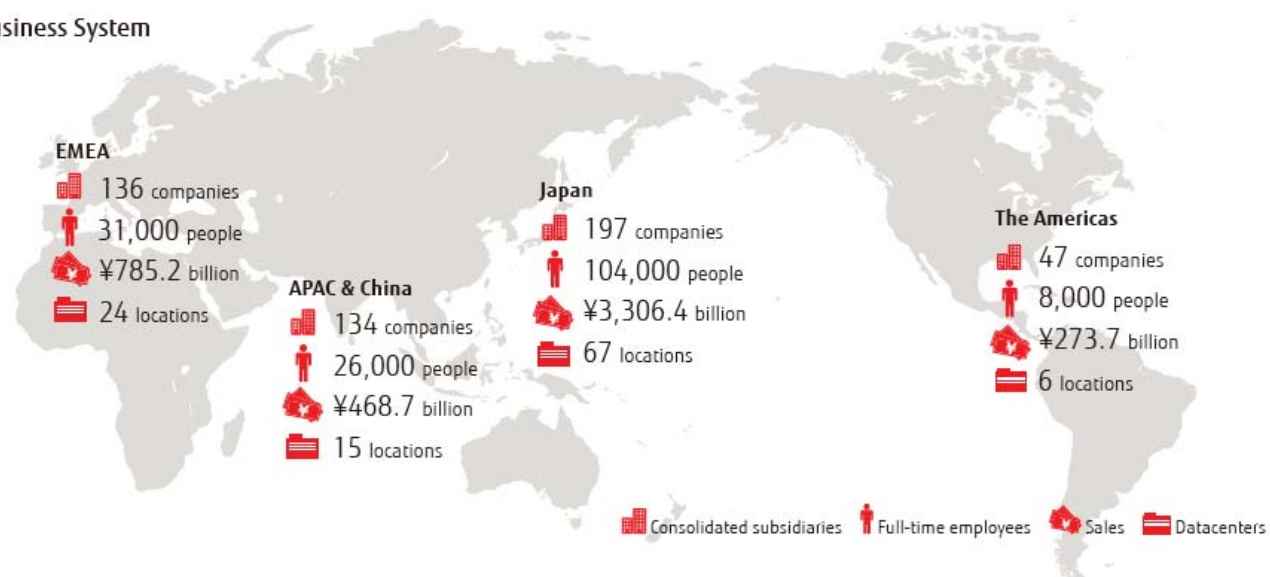


SPARC64X
high-performance
processor

Main consolidated subsidiaries

- Fujitsu Semiconductor Limited
- FDK Corporation
- Fujitsu Electronics Inc., others
- Shinko Electric Industries Co., Ltd.
- Fujitsu Component Limited

Global Business System



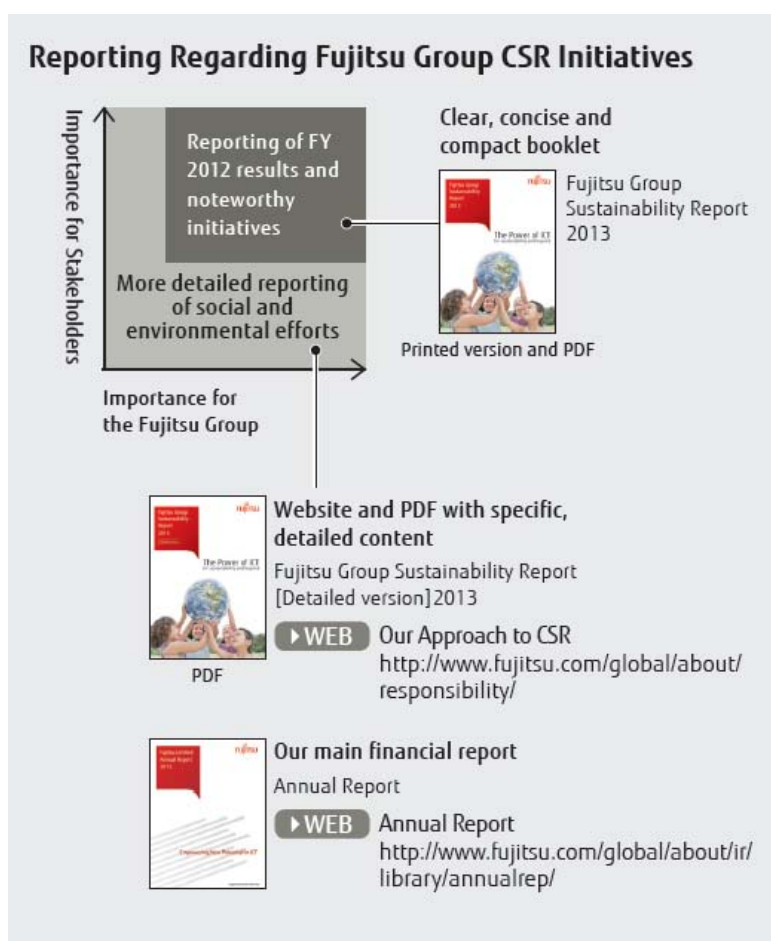
Editorial Policy

Reporting According to the Fujitsu Group CSR Policy.

The Fujitsu Group Sustainability Report 2013 (detailed version) reports in accordance with the five priority issues stipulated by the Fujitsu Group Corporate Social Responsibility (CSR) Policy, and includes typical examples of specific content relating to those issues.

Reporting System

Details concerning Fujitsu Group initiatives are reported in the formats described below.



Our basic editorial policy is to consider issues from two standpoints: the importance to society and stakeholders and the importance to the Fujitsu Group. In particular, we consider directions for this report based on opinions we receive from third parties, general readers, and stakeholders. We also continue to report on items featured in previous reports that each department considers to be still of prime importance to the Group.

Furthermore, we consider GRI guideline compliance and the comprehensiveness of the report from the standpoint of the ISO26000 social responsibility standard.

Reporting Period

This report focuses on activities in FY 2012, from April 1, 2012 to March 31, 2013, 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 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

While the whole of the Fujitsu Group is covered in this report, when it is necessary to indicate the range of applicability, we will specify Fujitsu Group (to indicate the Group as a whole) or Fujitsu (to indicate Fujitsu, Ltd. as an independent entity).

Note that for environmental reporting, the coverage is of Fujitsu itself plus a total of 123 companies (including companies outside Japan) centering on consolidated subsidiaries that build environmental management systems. Also, environmental burden data reporting covers Fujitsu itself, Fujitsu Laboratories, Ltd. (17 locations), and 27 main manufacturing subsidiaries (of which 24 are in Japan and three are overseas). Environmental accounting data covers Fujitsu itself and 28 main subsidiaries (of which 24 are in Japan and four are overseas).

Please refer to P.219 for a list of organizations covered in reporting on environmental activities and to P.211 for information on environmental performance data calculation standards.

Significant Changes in Coverage

Due to divestment, SHIN-ETSU FUJITSU LIMITED, Fujitsu Semiconductor Limited's Iwate Plant, and FUJITSU INTEGRATED MICROTECHNOLOGY LIMITED have been excluded from the environmental accounting reporting scope beginning with FY 2012. Regarding environmental burden data, Fujitsu Semiconductor Limited's Iwate Plant was excluded from the reporting scope starting with October 2012 and FUJITSU INTEGRATED MICROTECHNOLOGY LIMITED was excluded starting with December 2012.

Guidelines Referenced

- [GRI Sustainability Reporting Guidelines, Version 3.1 \(G3.1\)](#)
- ISO 26000 Guidance on Social Responsibility
- [Ministry of the Environment: Environmental Reporting Guidelines \(2012 edition\)](#) (Japanese)
- [Ministry of the Environment: Environmental Accounting Guidelines \(2005 edition\)](#) (Japanese)

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.

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President and Representative Director

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For inquiries about this report, please contact:

CSR Department

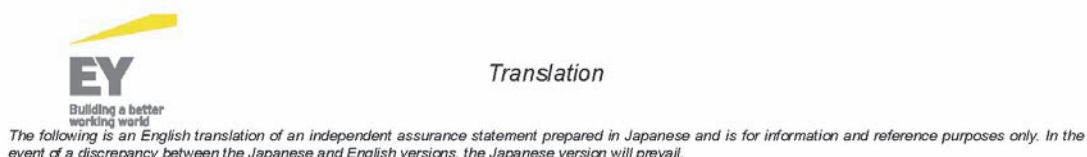
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Ensuring the Reliability of Information Disclosure

Independent Assurance Report

Fujitsu Group Sustainability Report 2013 [Detailed Version] has been reviewed by an independent body, Ernst & Young Sustainability Co., Ltd., whose independent assurance report is attached.



Translation

Independent Assurance Report

Date: August 9, 2013

To Mr. Masami Yamamoto
President and Representative Director
Fujitsu Limited

Kenji Sawami
Representative Director
Ernst & Young Sustainability Co., Ltd.

1. Scope and Purpose of Assurance Engagement

We, Ernst & Young Sustainability Co., Ltd., have been commissioned by Fujitsu Limited (hereafter the "Company") to provide limited assurance on the Fujitsu Group Sustainability Report 2013 (Detailed version) posted on the Company's Web site (hereafter the "Report").

The purpose of our assurance engagement is to perform the limited assurance work to determine whether the environmental accounting data and the Key Sustainability Performance Indicators^{*1} (hereafter the "Indicators") of the Company and its major subsidiaries for the year ended March 31, 2013 included in the Report were measured, calculated and reported in accordance with the Company's Reporting Standards^{*2} and the Company's policies and standards, and were contained in all material respects as well as to determine whether the Company's self-declaration on the application level of the Global Reporting Initiative (hereafter the "GRI") conform to the criteria provided by the GRI and to express a conclusion based on the work performed.

The Company is responsible for the preparation of the Report. Our responsibility is limited to independently express a conclusion on the Indicators.

^{*1} "Indicators" means the information defined in Sustainability Reporting Assurance and Registration Criteria (Revised in February 2011 by The Japanese Association of Assurance Organizations for Sustainability Information).

^{*2} The Reporting Standards refer to the Environmental Reporting Guidelines 2012 (Published in April 2012 by Ministry of the Environment), Sustainability Reporting Guidelines Version 3.1 (Revised in March 2011 by Global Reporting Initiative), and the important information subject to disclosure are identified in accordance with the Sustainability Reporting Assurance and Registration Criteria.

2. Summary of Assurance Procedures Performed

We performed limited assurance procedures in accordance with the International Standard on Assurance Engagements - Assurance Engagements Other than Audits or Reviews of Historical Financial Information (ISAE 3000), revised in December 2003 by the International Federation of Accountants and Practical Guidelines for the Assurance of Sustainability Information, revised in December 2012 by the Japanese Association of Assurance Organizations for Sustainability Information. In a limited assurance engagement, assurance procedures are more limited than those of a reasonable assurance engagement conducted in accordance with ISAE3000. Therefore, the level of assurance provided is not as that provided by a reasonable assurance.

The summary of the procedures we performed for our assurance engagement is as follows:

- Reading relevant documents with regard to the Company's Reporting Standards and the Company's policies and standards and inquiring of personal responsible thereof;
- Reading relevant documents with regard to the design of the Company's internal control of the Indicators and inquiring of personal responsible thereof at the headquarters and the sites visited;
- Performing analytical procedures of the Indicators at the headquarters and the sites visited;
- Agreeing to supporting documents and recalculating with part of the Indicators at the headquarters and the sites visited on a test basis; and
- Reading relevant documents with regard to the Company's self-declaration on the GRI application level with the criteria provided by the GRI conforming to the criteria provided for by the GRI and inquiry of personal responsible thereof.

The Indicators subject to our assurance procedure are set out on "(Annex) The Indicators subject to our assurance procedure on the Fujitsu Group Sustainability Report 2013".

3. Conclusion

Based on the assurance procedures performed, nothing has come to our attention that caused us to believe that the Indicators for the year ended March 31, 2013 were not measured, calculated and reported in accordance with the Company's Reporting Standards and the Company's policies and standards and were not contained in all material respect as well as the self-declaration on the application level of GRI does not conform to the criteria provided by the GRI.

4. Independence

We have no conflict of interest relationships with Company that are specified in the Code of Ethics of the Japanese Association of Assurance Organizations for Sustainability Information.

The following is an English translation of an independent assurance statement prepared in Japanese and is for information and reference purposes only. In the event of a discrepancy between the Japanese and English versions, the Japanese version will prevail.

(Annex) The Indicators subject to our assurance procedure on the Fujitsu Group Sustainability Report 2013

• The Environmental Indicators

The subject indicators	Page
◆Reduce greenhouse gas emissions Performance (FY2012) Reduce total greenhouse gas emissions associated with manufacturing globally to 6% below FY 1990 levels by end of FY 2012.	56
◆Factory improvements (chemicals) Performance (FY2012) Reduce output of priority chemicals to 10% below FY2007 levels by end of FY 2012.	56
◆Factory improvements (waste) Performance (FY2012) Reduce waste generation to 20% below FY 2007 levels by end of FY 2012.	56
◆Reduce CO2 in transport and distribution Performance (FY2012) Reduce CO2 emissions from domestic transport to 15% below FY 2008 levels by end of FY 2012.	56
◆Operating Activities and Environmental Load (FY2012) INPUT Chemical Substances Water Energy(Manufacture) OUTPUT Chemical Substances Atmospheric Release (Manufacture) ~CO2 and Greenhouse gases other than CO2 Atmospheric Release (Manufacture) ~NOx and SOx Atmospheric Release (Distribution) ~CO2 Water Discharge Waste	63
◆Fiscal 2012 Environmental Accounting Results	66~67
◆【Graph】Trends in Total Greenhouse Gas Emissions	122
◆【Graph】Renewable energy	125
◆【List】GHG Emissions Report based on GHG Protocol Standards •Reporting company (Scope 1 2) Direct emissions, Indirect emissions from energy sources •Downstream (Scope 3) Transportation and distribution (Downstream) – Distribution in Japan	128~129
◆【Graph】Trends in Amount of Waste Generated and Effective Utilization Ratio	138
◆【List】Breakdown of Waste Generated, Effective Utilization, and Final Disposal	138
◆【Graph】Trends in Water Usage and Amount of Recycled Water	140
◆【Graph】Trends in Emissions of Specific Chemical Substances	141
◆Environmental Liabilities	143
◆Business Sites Where Soil or Groundwater Contamination Has Been Found	145~146
◆【Graph】Trends in CO2 Emissions From Domestic Transportation in Japan	159

The following is an English translation of an independent assurance statement prepared in Japanese and is for information and reference purposes only. In the event of a discrepancy between the Japanese and English versions, the Japanese version will prevail.

• The Social Indicators

The subject indicators	Page
◆Promoting CSR Activities Across the Group The number of Group companies which performed survey based on ISO26000	20
◆CSR Penetration and Execution The number of responses of questionnaire for all employees concerning CSR priority issues	20
◆Reliability and Security Through ICT The number of Fujitsu Limited and Group companies (include the number of employees) completed adoption of standardized communication platforms	20
◆Helping Individuals Flourish The number of attendees to development program for women leader Ratio of female executives at Fujitsu, Ratio of employees with disabilities	20
◆Promoting a Work-Life Balance The number of employees taking child care leave, The number of employees taking leave for wife's childbirth	20
◆Foster global business leaders The number of attendees to programs	20
◆Stakeholder Communications The number of comments of questionnaire on Sustainability Report The number of periodic dialogue with residents in regions with major business sites	20
◆Collaboration with Stakeholders The number of NGOs and NPOs provided cloud-enabled environmental and life form surveying tools, free of charge The number of sessions of dialogue with experts	20
◆Harmony with Society The number of internal database records of social contribution activities linked to local communities The number of volunteers dispatched to regions affected by the Great East Japan Earthquake	20
◆【Graph】Trends in Woman Managers	219
◆【Graph】Trend in Employment Rate of People with Disabilities	220
◆【Graph】Trends in Numbers and Average Ages of Employees	221,328
◆【Graph】Employees by Region	222,328
◆【Graph】Hiring of Recent College Graduates	227
◆Average Years of Service	227
◆Number of Employees Using the Care Leave Support System	229
◆【Graph】Frequency of Industrial Accidents	232
◆【Graph】Rate of Periodic Checkups	234
◆【Graph】Rate of Chronic Illness Checkups	234
◆Promoting Socially Responsible Procurement (the number of written surveys to suppliers)	279
◆【Graph】Fujitsu Group's Pending and Granted Patents Worldwide	321
◆【Graph】Breakdown of Granted and Pending Patents for Each Region	321
◆Number of Granted Patents in Japan	322
◆Number of Granted Patents in the U.S.	323
◆Employees、Directors	326

This report has been duly granted the sustainability report audit and registration mark stipulated by the Japanese Association of Assurance Organization for Sustainability Information, which assures the reliability of the information presented here meets its standards.



- [The Japanese Association of Assurance Organization for Sustainability Information](#)

GRI Sustainability Reporting Guidelines, Version 3.1 (G3.1)

This report corresponds to GRI Application Level B+.

A GRI guideline comparison table can be found on the following website.

- [Fujitsu Group Sustainability Report 2013 GRI Guideline Comparison Table](#)

GRI Guideline Comparison Table (Fujitsu Group Sustainability Report 2013)










1. Strategy and Analysis


1. Strategy and Analysis

GRI Indicator		Pages in Fujitsu Group Sustainability Report (Titles)	United Nations Global Compact
1.1	Statement from the most senior decision-maker of the organization (e.g., CEO, chair, or equivalent senior position) about the relevance of sustainability to the organization and its strategy.	<ul style="list-style-type: none"> • Top Message 	-
1.2	Description of key impacts, risks, and opportunities.	<ul style="list-style-type: none"> • The Power to Shape the Future • The Power to Provide Equal Opportunities to All People • The Power to Support Safe and Secure Living • Risk Management "Business Risks" • Environmental Management at the Fujitsu Group 	-

2. Organizational Profile















2. Organizational Profile


GRI Indicator		Pages in Fujitsu Group Sustainability Report (Titles)	United Nations Global Compact
2.1	Name of the organization.	<ul style="list-style-type: none">  Fujitsu Group Profile "Parent Company" [214KB] 	-
2.2	Primary brands, products, and/or services.	<ul style="list-style-type: none">  Fujitsu Group Profile "Regarding Our Business Segments" [214KB] 	-
2.3	Operational structure of the organization, including main divisions, operating companies, subsidiaries, and joint ventures.	<ul style="list-style-type: none">  Fujitsu Group Profile "Regarding Our Business Segments" [214KB]  Editorial Policy "Organizations Covered" [119KB] <p>[Reference] Organization</p>	-
2.4	Location of organization's headquarters.	<ul style="list-style-type: none">  Fujitsu Group Profile "Addresses" [214KB] 	-
2.5	Number of countries where the organization operates, and names of countries with either major operations or that are specifically relevant to the sustainability issues covered in the report.	<ul style="list-style-type: none"> The Power to Shape the Future The Power to Provide Equal Opportunities to All People The Power to Support Safe and Secure Living  Fujitsu Group Profile "Global Business System" [214KB] 	-
2.6	Nature of ownership and legal form.	<ul style="list-style-type: none"> Corporate Governance "Corporate Governance Framework"  Fujitsu Group Profile "Parent Company" [214KB] <p>[Reference] Worldwide</p>	-
2.7	Markets served (including geographic breakdown, sectors served, and types of customers/beneficiaries).	<ul style="list-style-type: none">  Fujitsu Group Profile "Main Business Activities," "Sales by Region," and "Consolidated Net Sales by Business Segment" [214KB] 	-
2.8	Scale of the reporting organization. <ul style="list-style-type: none"> Number of employees; Number of operations; Net sales (for private sector organizations) or net revenues (for public sector organizations); Total capitalization broken down in terms of debt and equity (for private sector organizations); and Quantity of products or services provided. 	<ul style="list-style-type: none">  Fujitsu Group Profile "Sales," "Capital," "Total Assets," "Employees" and "Business Segments" [214KB] <p>[Reference] Fujitsu at a Glance</p>	-

GRI Indicator		Pages in Fujitsu Group Sustainability Report (Titles)	United Nations Global Compact
2.9	<p>Significant changes during the reporting period regarding size, structure, or ownership.</p> <ul style="list-style-type: none"> • The location of, or changes in operations, including facility openings, closings, and expansions; and • Changes in the share capital structure and other capital formation, maintenance, and alteration operations (for private sector organizations). 	<ul style="list-style-type: none"> •  Editorial Policy "Significant Changes in Coverage" [119KB] 	-
2.10	Awards received in the reporting period.	<ul style="list-style-type: none"> • Socially Responsible Investment (SRI) • List of External Awards and External Evaluations 	-

3. Report Parameters


3. Report Parameters

GRI Indicator		Pages in Fujitsu Group Sustainability Report (Titles)	United Nations Global Compact
Profile of Report			
3.1	Reporting period (e.g., fiscal/calendar year) for information provided.	<ul style="list-style-type: none">  Editorial Policy "Reporting Period" [119KB] 	-
3.2	Date of most recent previous report (if any).	<ul style="list-style-type: none">  Editorial Policy "Publisher" [119KB] 	-
3.3	Reporting cycle (annual, biennial, etc.).	<ul style="list-style-type: none">  Editorial Policy "Publisher" [119KB] 	-
3.4	Contact point for questions regarding the report or its contents.	<ul style="list-style-type: none">  Editorial Policy [119KB] 	-
Scope and Boundary of Report			
3.5	Process for defining report content. <ul style="list-style-type: none"> Determining materiality; Prioritizing topics within the report; and Identifying stakeholders the organization expects to use the report. 	<ul style="list-style-type: none"> CSR Policy  Editorial Policy "Reporting According to Fujitsu Group CSR Policy" [119KB] 	-
3.6	Boundary of the report (e.g., countries, divisions, subsidiaries, leased facilities, joint ventures, suppliers). See GRI Boundary Protocol for further guidance.	<ul style="list-style-type: none">  Editorial Policy "Organizations Covered" [119KB] 	-
3.7	State any specific limitations on the scope or boundary of the report (see completeness principle for explanation of scope).	<ul style="list-style-type: none">  Editorial Policy "Organizations Covered" [119KB]  Environmental Performance Data Calculation Standards [144KB]  List of Companies Covered by the Report on Environmental Activities [55KB] 	-
3.8	Basis for reporting on joint ventures, subsidiaries, leased facilities, outsourced operations, and other entities that can significantly affect comparability from period to period and/or between organizations.	<ul style="list-style-type: none">  Editorial Policy "Organizations Covered." "Significant Changes in Coverage" [119KB] 	-
3.9	Data measurement techniques and the bases of calculations, including assumptions and techniques underlying estimations applied to the compilation of the indicators and other information in the report. Explain any decisions not to apply, or to substantially diverge from, the GRI Indicator Protocols.	<ul style="list-style-type: none">  Editorial Policy "Guidelines Referenced" [119KB]  Environmental Performance Data Calculation Standards [144KB] 	-
3.10	Explanation of the effect of any re-statements of information provided in earlier reports, and the reasons for such re-statement (e.g., mergers/acquisitions, change of base years/periods, nature of business, measurement methods).	<ul style="list-style-type: none">  Editorial Policy "Reporting System" [119KB] 	-
3.11	Significant changes from previous reporting periods in the scope, boundary, or measurement methods applied in the report.	<ul style="list-style-type: none">  Editorial Policy "Organizations Covered." "Significant Changes in Coverage" [119KB] 	-

GRI Indicator		Pages in Fujitsu Group Sustainability Report (Titles)	United Nations Global Compact
GRI Content Index			
3.12	Table identifying the location of the Standard Disclosures in the report.	<ul style="list-style-type: none"> FUJITSU GRI Sustainability Reporting Guidelines Comparison Tables 	-
3.13	Policy and current practice with regard to seeking external assurance for the report. If not included in the assurance report accompanying the sustainability report, explain the scope and basis of any external assurance provided. Also explain the relationship between the reporting organization and the assurance provider(s).	<ul style="list-style-type: none">  Independent Assurance Report "Ensuring the Reliability of Information Disclosure" [917KB] 	-

4. Governance, Commitments, and Engagement

4. Governance, Commitments, and Engagement

GRI Indicator		Pages in Fujitsu Group Sustainability Report (Titles)	United Nations Global Compact
Governance			
4.1	Governance structure of the organization, including committees under the highest governance body responsible for specific tasks, such as setting strategy or organizational oversight.	<ul style="list-style-type: none"> • Corporate Governance "Corporate Governance Framework" 	1-10
4.2	Indicate whether the Chair of the highest governance body is also an executive officer (and, if so, their function within the organization's management and the reasons for this arrangement).	<ul style="list-style-type: none"> • Corporate Governance "Corporate Governance Framework" 	
4.3	For organizations that have a unitary board structure, state the number and gender of members of the highest governance body that are independent and/or non-executive members.	<ul style="list-style-type: none"> • Corporate Governance "Corporate Governance Framework" •  Fujitsu Group Profile "Number of Directors" [214KB] 	
4.4	Mechanisms for shareholders and employees to provide recommendations or direction to the highest governance body.	<ul style="list-style-type: none"> • With Our Shareholders and Investors "Communicating with Shareholders and Investors" • Corporate Governance "Corporate Governance Framework" • Compliance "Helpline" 	
4.5	Linkage between compensation for members of the highest governance body, senior managers, and executives (including departure arrangements), and the organization's performance (including social and environmental performance).	<ul style="list-style-type: none"> • Corporate Governance "The Framework for Strengthening Corporate Governance" 	
4.6	Processes in place for the highest governance body to ensure conflicts of interest are avoided.	<ul style="list-style-type: none"> • Corporate Governance "The Framework for Strengthening Corporate Governance" 	
4.7	Process for determining the composition, qualifications, and expertise of the members of the highest governance body and its committees, including any consideration of gender and other indicators of diversity.	<ul style="list-style-type: none"> • Corporate Governance "The Framework for Strengthening Corporate Governance" 	
4.8	Internally developed statements of mission or values, codes of conduct, and principles relevant to economic, environmental, and social performance and the status of their implementation.	<ul style="list-style-type: none"> • Our Corporate Philosophy "FUJITSU Way" • CSR Policy • Environmental Management at the Fujitsu Group • Targets and Results for the Fujitsu Group Environmental Protection Program (Stage VI) • Fujitsu Group Environmental Action Plan (Stage VII) 	

GRI Indicator		Pages in Fujitsu Group Sustainability Report (Titles)	United Nations Global Compact
4.9	Procedures of the highest governance body for overseeing the organization's identification and management of economic, environmental, and social performance, including relevant risks and opportunities, and adherence or compliance with internationally agreed standards, codes of conduct, and principles.	<ul style="list-style-type: none">• United Nations Global Compact• Corporate Governance "Corporate Governance Framework"• Risk Management "Business Risks"• Environmental Management	1-10
4.10	Processes for evaluating the highest governance body's own performance, particularly with respect to economic, environmental, and social performance.	<ul style="list-style-type: none">• CSR Activity Targets and Achievements• Corporate Governance "The Framework for Strengthening Corporate Governance"• Environmental Management	
Commitments to External Initiatives			
4.11	Explanation of whether and how the precautionary approach or principle is addressed by the organization.	<ul style="list-style-type: none">• Activities to Disseminate the Fujitsu Way• CSR Activities Utilizing ISO 26000• United Nations Global Compact• Risk Management "The Risk Management Framework", "Risk Management Processes" <p>[Reference] Fujitsu Group Environmental Policy</p>	1-10
4.12	Externally developed economic, environmental, and social charters, principles, or other initiatives to which the organization subscribes or endorses.	<ul style="list-style-type: none">• CSR Activities Utilizing ISO 26000• United Nations Global Compact• Conservation of Biodiversity• Cooperation with External Organizations• Efforts to Prevent Global Warming "GHG Emissions Report based on GHG Protocol Standards"	
4.13	Memberships in associations (such as industry associations) and/or national/international advocacy organizations in which the organization: <ul style="list-style-type: none">• Has positions in governance bodies;• Participates in projects or committees;• Provides substantive funding beyond routine membership dues; or• Views membership as strategic.	<ul style="list-style-type: none">• Governments & Industry Groups (Public Policy)• Conservation of Biodiversity• Cooperation with External Organizations• Reducing Chemical Substances in Products "Contributing to Creating Mechanisms for Chemical Substance Management"• Efforts to Prevent Global Warming "GHG Emissions Report based on GHG Protocol Standards"	-

GRI Indicator		Pages in Fujitsu Group Sustainability Report (Titles)	United Nations Global Compact
Stakeholders Engagement			
4.14	<p>List of stakeholder groups engaged by the organization. Examples of stakeholder groups are:</p> <ul style="list-style-type: none"> • Civil society; • Customers; • Employees, other workers, and their trade unions; • Local communities; • Shareholders and providers of capital; and • Suppliers. 	<ul style="list-style-type: none"> • Our Approach to CSR "The Fujitsu Group's Stakeholders" • Environmental and Social Contribution Activities • Providing Cloud Services to Support Organizations Working to Conserve Biodiversity(Highlight) 	-
4.15	<p>Basis for identification and selection of stakeholders with whom to engage.</p>	<ul style="list-style-type: none"> • Our Approach to CSR "The Fujitsu Group's Stakeholders" • Stakeholder Dialogue • Communicating with Stakeholders 	-

GRI Indicator		Pages in Fujitsu Group Sustainability Report (Titles)	United Nations Global Compact
4.16	Approaches to stakeholder engagement, including frequency of engagement by type and by stakeholder group.	<ul style="list-style-type: none"> • Stakeholder Dialogue • Communicating with Stakeholders • <Customers, international society, and local communities> • The Power to Shape the Future • The Power to Provide Equal Opportunities to All People • The Power to Support Safe and Secure Living • With Our Customers • Quality Initiatives • Governments & Industry Groups (Public Policy) • Approach to Social Contribution Activities • Promoting Learning & Education, and Cultural and Sponsorship Activities • Contributing to Society through Sports • International Support and Disaster-relief Activities • Example Activities in Japan and Overseas • Conservation of Biodiversity • Environmental and Social Contribution Activities • In-House Educational and Enlightenment Activities • <Shareholders and other investors> • With Our Shareholders and Investors • <Suppliers> • With Our Suppliers • <Employees> • Diversity and Inclusion • Efforts Promoting Respect for Human Rights • Creating Good Working Conditions • Occupational Health and Safety and Health Management • Human Resource Development 	1-10
4.17	Key topics and concerns that have been raised through stakeholder engagement, and how the organization has responded to those key topics and concerns, including through its reporting.	<ul style="list-style-type: none"> • Stakeholder Dialogue • Communicating with Stakeholders • With Our Customers "Examples of Improvements Based on Customer Feedback" 	-

5. Management Approach and Performance Indicators

Economic

5. Management Approach and Performance Indicators: Economic

GRI Indicator		Pages in Fujitsu Group Sustainability Report (Titles)	United Nations Global Compact
	Disclosure on Management Approach	<ul style="list-style-type: none"> • Our Corporate Philosophy "FUJITSU Way" • CSR Policy • PDF Editorial Policy "Annual Report" [119KB] 	-
Economic Performance			
EC1	Direct economic value generated and distributed, including revenues, operating costs, employee compensation, donations and other community investments, retained earnings, and payments to capital providers and governments.	-	-
EC2	Financial implications and other risks and opportunities for the organization's activities due to climate change.	<ul style="list-style-type: none"> • Green ICT-Achievements in Reducing CO₂ Emissions • FY 2012 Environmental Accounting Results • Efforts to Prevent Global Warming 	7,8,9
EC3	Coverage of the organization's defined benefit plan obligations.	[Reference] FY 2012 Year-end Report (Reports on the 113th Business Period)	-
EC4	Significant financial assistance received from government.	-	-
Market Presence			
EC5	Range of ratios of standard entry level wage by gender compared to local minimum wage at significant locations of operation.	-	-
EC6	Policy, practices, and proportion of spending on locally-based suppliers at significant locations of operation.	-	-
EC7	Procedures for local hiring and proportion of senior management hired from the local community at significant locations of operation.	-	-

GRI Indicator		Pages in Fujitsu Group Sustainability Report (Titles)	United Nations Global Compact
Indirect Economic Impacts			
EC8	Development and impact of infrastructure investments and services provided primarily for public benefit through commercial, in-kind, or pro bono engagement.	<ul style="list-style-type: none"> • The Power to Shape the Future • The Power to Provide Equal Opportunities to All People • The Power to Support Safe and Secure Living • Approach to Social Contribution Activities • Promoting Learning & Education, and Cultural and Sponsorship Activities • Contributing to Society through Sports • International Support and Disaster-relief Activities • Example Activities in Japan and Overseas • Conservation of Biodiversity • Environmental and Social Contribution Activities • Providing Cloud Services to Support Organizations Working to Conserve Biodiversity(Highlight) 	8,9
EC9	Understanding and describing significant indirect economic impacts, including the extent of impacts.	-	-

5. Management Approach and Performance Indicators: Environmental

GRI Indicator		Pages in Fujitsu Group Sustainability Report (Titles)	United Nations Global Compact
	Disclosure on Management Approach	<ul style="list-style-type: none"> • Environmental Management at the Fujitsu Group • Targets and Results for the Fujitsu Group Environmental Protection Program (Stage VI) • Fujitsu Group Environmental Action Plan (Stage VII) • FY 2012 Environmental Accounting Results • Environmental Management 	7,8,9
Material			
EN1	Materials used by weight or volume.	<ul style="list-style-type: none"> • Operating Activities and Environmental Load (FY2012) 	8
EN2	Percentage of materials used that are recycled input materials.		-
Energy			
EN3	Direct energy consumption by primary energy source.	<ul style="list-style-type: none"> • Operating Activities and Environmental Load (FY2012) 	8
EN4	Indirect energy consumption by primary source.	<ul style="list-style-type: none"> • Operating Activities and Environmental Load (FY2012) 	8
EN5	Energy saved due to conservation and efficiency improvements.	<ul style="list-style-type: none"> • Efforts to Prevent Global Warming 	7,8,9
EN6	Initiatives to provide energy-efficient or renewable energy-based products and services, and reductions in energy requirements as a result of these initiatives.	<ul style="list-style-type: none"> • Eco-Friendly Products • Solutions that Benefit the Environment • Providing Environmental Solutions 	7,8,9
EN7	Initiatives to reduce indirect energy consumption and reductions achieved.	<ul style="list-style-type: none"> • Efforts to Prevent Global Warming • Green Procurement with a Centralized Global Procurement System • Environmental Considerations in Transportation 	7,8,9
Water			
EN8	Total water withdrawal by source.	<ul style="list-style-type: none"> • Operating Activities and Environmental Load (FY2012) • Environmental Activities in Factories "Effective Use of Water Resources" 	8
EN9	Water sources significantly affected by withdrawal of water.	-	-
EN10	Percentage and total volume of water recycled and reused.	<ul style="list-style-type: none"> • Environmental Activities in Factories "Effective Use of Water Resources" 	8

GRI Indicator		Pages in Fujitsu Group Sustainability Report (Titles)	United Nations Global Compact
Biodiversity			
EN11	Location and size of land 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.	<ul style="list-style-type: none"> • Conservation of Biodiversity • Environmental and Social Contribution Activities 	7,8,9
EN13	Habitats protected or restored.	<ul style="list-style-type: none"> • Conservation of Biodiversity • Environmental and Social Contribution Activities 	7,8
EN14	Strategies, current actions, and future plans for managing impacts on biodiversity.	<ul style="list-style-type: none"> • Targets and Results for the Fujitsu Group Environmental Protection Program (Stage VI) • Fujitsu Group Environmental Action Plan (Stage VII) • Conservation of Biodiversity • Green Procurement with a Centralized Global Procurement System 	7,8,9
EN15	Number of IUCN Red List species and national conservation list species with habitats in areas affected by operations, by level of extinction risk.	-	-
Emissions, Effluents, and Waste			
EN16	Total direct and indirect greenhouse gas emissions by weight.	<ul style="list-style-type: none"> • Operating Activities and Environmental Load (FY2012) • Efforts to Prevent Global Warming 	8
EN17	Other relevant indirect greenhouse gas emissions by weight.	<ul style="list-style-type: none"> • Operating Activities and Environmental Load (FY2012) • Efforts to Prevent Global Warming 	8
EN18	Initiatives to reduce greenhouse gas emissions and reductions achieved.	<ul style="list-style-type: none"> • Targets and Results for the Fujitsu Group Environmental Protection Program (Stage VI) • Green ICT-Achievements in Reducing CO₂ Emissions • Eco-Friendly Products • Solutions that Benefit the Environment • Efforts to Prevent Global Warming • Environmental Considerations in Transportation 	7,8,9
EN19	Emissions of ozone-depleting substances by weight.	<ul style="list-style-type: none"> • Environmental Activities in Factories "Preventing Ozone Layer Depletion" 	8

GRI Indicator		Pages in Fujitsu Group Sustainability Report (Titles)	United Nations Global Compact
EN20	NOx, SOx, and other significant air emissions by type and weight.	<ul style="list-style-type: none"> Operating Activities and Environmental Load (FY2012) 	8
EN21	Total water discharge by quality and destination.	<ul style="list-style-type: none"> Operating Activities and Environmental Load (FY2012) 	8
EN22	Total weight of waste by type and disposal method.	<ul style="list-style-type: none"> Operating Activities and Environmental Load (FY2012) Environmental Activities in Factories "Reducing the Amount of Waste Generated" 	8
EN23	Total number and volume of significant spills.	<ul style="list-style-type: none"> Preventing Soil and Groundwater Pollution 	8
EN24	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.	-	-
EN25	Identity, size, protected status, and biodiversity value of water bodies and related habitats significantly affected by the reporting organization's discharges of water and runoff.	-	-
Products and Services			
EN26	Initiatives to mitigate environmental impacts of products and services, and extent of impact mitigation.	<ul style="list-style-type: none"> Targets and Results for the Fujitsu Group Environmental Protection Program (Stage VI) Leading-Edge Green ICT R&D Eco-Friendly Products Solutions that Benefit the Environment 	7,8,9
EN27	Percentage of products sold and their packaging materials that are reclaimed by category.	<ul style="list-style-type: none"> Operating Activities and Environmental Load (FY2012) Product Recycling 	8,9
Compliance			
EN28	Monetary value of significant fines and total number of non-monetary sanctions for non-compliance with environmental laws and regulations.	<ul style="list-style-type: none"> Environmental Management "Status of Environmental Compliance" 	8
Transport			
EN29	Significant environmental impacts of transporting products and other goods and materials used for the organization's operations, and transporting members of the workforce.	<ul style="list-style-type: none"> Operating Activities and Environmental Load (FY2012) Efforts to Prevent Global Warming "GHG Emissions Report based on GHG Protocol Standards" Environmental Considerations in Transportation 	8,9
Overall			
EN30	Total environmental protection expenditures and investments by type.	<ul style="list-style-type: none"> FY 2012 Environmental Accounting Results 	7,8,9

5. Management Approach and Performance Indicators: Social

GRI Indicator		Pages in Fujitsu Group Sustainability Report (Titles)	United Nations Global Compact
Labor Practices and Decent Work			
	Disclosure on Management Approach	<ul style="list-style-type: none"> • Our Corporate Philosophy "FUJITSU Way" • CSR Policy • Diversity and Inclusion "Embracing Diversity and Inclusion" • Efforts Promoting Respect for Human Rights "FUJITSU Guiding Principles of Respect for Human Rights in Employment" • With Our Suppliers "FUJITSU CSR PROCUREMENT GUIDELINES" 	1,2,3,4,5,6,10
Employment			
LA1	Total workforce by employment type, employment contract, and region, broken down by gender.	-	-
LA2	Total number and rate of new employee hires and employee turnover by age group, gender, and region.	-	-
LA3	Benefits provided to full-time employees that are not provided to temporary or part-time employees, by significant locations of operation.	-	-
LA15	Return to work and retention rates after parental leave, by gender.	<ul style="list-style-type: none"> • Creating Good Working Conditions "Number of Employees Using the Care Leave Support System" 	6
Labor/Management Relations			
LA4	Percentage of employees covered by collective bargaining agreements.	<ul style="list-style-type: none"> • Creating Good Working Conditions "Labor Relations" 	1,3
LA5	Minimum notice period(s) regarding significant operational changes, including whether it is specified in collective agreements.	-	-
Occupational Health and Safety			
LA6	Percentage of total workforce represented in formal joint management-worker health and safety committees that help monitor and advise on occupational health and safety programs.	<ul style="list-style-type: none"> • Occupational Health and Safety and Health Management "Efforts to Improve Occupational Health and Safety" 	1
LA7	Rates of injury, occupational diseases, lost days, and absenteeism, and number of work-related fatalities by region and by gender.	-	-
LA8	Education, training, counseling, prevention, and risk-control programs in place to assist workforce members, their families, or community members regarding serious diseases.	<ul style="list-style-type: none"> • Occupational Health and Safety and Health Management "Building a Culture Where Employees Can Work Confidently and Positively Through Efforts to Maintain and Enhance Health" • Risk Management "Measures Against New Strains of Influenza" 	1

GRI Indicator		Pages in Fujitsu Group Sustainability Report (Titles)	United Nations Global Compact
LA9	Health and safety topics covered in formal agreements with trade unions.	-	-
Training and Education			
LA10	Average hours of training per year per employee by gender, and by employee category.	-	-
LA11	Programs for skills management and lifelong learning that support the continued employability of employees and assist them in managing career endings.	<ul style="list-style-type: none"> • Diversity and Inclusion "Creating a Workplace Environment in which Older Workers Can Thrive" 	6
LA12	Percentage of employees receiving regular performance and career development reviews, by gender.	-	-
Diversity and Equal Opportunity			
LA13	Composition of governance bodies and breakdown of employees per employee category according to gender, age group, minority group membership, and other indicators of diversity.	<ul style="list-style-type: none"> • Diversity and Inclusion "FY 2012 Overview and Key Issues," "Creating a Workplace Environment Where Female Employees Can Participate Actively" 	1,6
Equal Remuneration for Women and Men			
LA14	Ratio of basic salary and remuneration of women to men by employee category, by significant locations of operation.	-	

Human Rights

5. Management Approach and Performance Indicators: Human Rights

GRI Indicator		Pages in Fujitsu Group Sustainability Report (Titles)	United Nations Global Compact
	Disclosure on Management Approach	<ul style="list-style-type: none"> • Our Corporate Philosophy "FUJITSU Way" • CSR Policy • Diversity and Inclusion "Embracing Diversity and Inclusion" • Efforts Promoting Respect for Human Rights "FUJITSU Guiding Principles of Respect for Human Rights in Employment" • With Our Suppliers "FUJITSU CSR PROCUREMENT GUIDELINES" 	1,2,4,5,6,10
Investment and procurement practices			
HR1	Percentage and total number of significant investment agreements and contracts that include clauses incorporating human rights concerns, or that have undergone human rights screening.	-	-
HR2	Percentage of significant suppliers, contractors and other business partners that have undergone human rights screening, and actions taken.	<ul style="list-style-type: none"> • With Our Suppliers 	1,2,3,4,5,6,10
HR3	Total hours of employee training on policies and procedures concerning aspects of human rights that are relevant to operations, including the percentage of employees trained.	<ul style="list-style-type: none"> • Activities to Disseminate the Fujitsu Way "Implementation of e-Learning" 	1
Non-Discrimination			
HR4	Total number of incidents of discrimination and corrective actions taken.	-	-
Freedom of Association and Collective Bargaining			
HR5	Operations and significant suppliers identified in which the right to exercise freedom of association and collective bargaining may be violated or at significant risk, and actions taken to support these rights.	-	-
Child Labor			
HR6	Operations and significant suppliers identified as having significant risk for incidents of child labor, and measures taken to contribute to the effective abolition of child labor.	-	-
Forced and Compulsory Labor			
HR7	Operations and significant suppliers identified as having significant risk for incidents of forced or compulsory labor, and measures to contribute to the elimination of all forms of forced or compulsory labor.	-	-

GRI Indicator		Pages in Fujitsu Group Sustainability Report (Titles)	United Nations Global Compact
Security Practices			
HR8	Percentage of security personnel trained in the organization's policies or procedures concerning aspects of human rights that are relevant to operations.	-	-
Indigenous Rights			
HR9	Total number of incidents of violations involving rights of indigenous people and actions taken.	-	-
Assessment			
HR10	Percentage and total number of operations that have been subject to human rights reviews and/or impact assessments.	-	-
Remediation			
HR11	Number of grievances related to human rights filed, addressed and resolved through formal grievance mechanisms.	-	-

5. Management Approach and Performance Indicators: Society

GRI Indicator		Pages in Fujitsu Group Sustainability Report (Titles)	United Nations Global Compact
	Disclosure on Management Approach	<ul style="list-style-type: none"> • Our Corporate Philosophy "FUJITSU Way" • CSR Policy • Compliance • Approach to Social Contribution Activities 	10
Local Communities			
SO1	Percentage of operations with implemented local community engagement, impact assessments, and development programs.	<ul style="list-style-type: none"> • Targets and Results for the Fujitsu Group Environmental Protection Program (Stage VI) "Reduce impact of company's operations on biodiversity" 	8
SO9	Operations with significant potential or actual negative impacts on local communities.	<ul style="list-style-type: none"> • Preventing Soil and Groundwater Pollution 	7,8
SO10	Prevention and mitigation measures implemented in operations with significant potential or actual negative impacts on local communities.	<ul style="list-style-type: none"> • Preventing Soil and Groundwater Pollution 	7,8
Corruption			
SO2	Percentage and total number of business units analyzed for risks related to corruption.	<ul style="list-style-type: none"> • Risk Management "Risk Management Processes" 	10
SO3	Percentage of employees trained in organization's anti-corruption policies and procedures.	<ul style="list-style-type: none"> • Activities to Disseminate the Fujitsu Way "Implementation of e-Learning" 	10
SO4	Actions taken in response to incidents of corruption.	-	
Public Policy			
SO5	Public policy positions and participation in public policy development and lobbying.	<ul style="list-style-type: none"> • Governments & Industry Groups (Public Policy) 	-
SO6	Total value of financial and in-kind contributions to political parties, politicians, and related institutions by country.	-	-
Anti-Competitive Behavior			
SO7	Total number of legal actions for anti-competitive behavior, anti-trust, and monopoly practices and their outcomes.	-	-
Compliance			
SO8	Monetary value of significant fines and total number of non-monetary sanctions for non-compliance with laws and regulations.	-	-

5. Management Approach and Performance Indicators: Product Responsibility

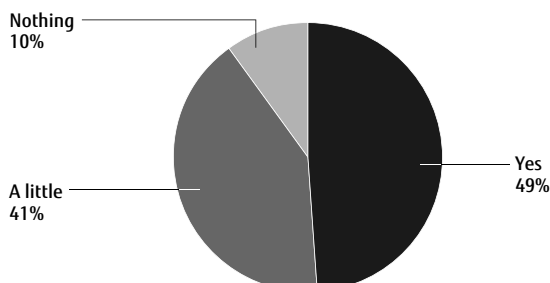
GRI Indicator		Pages in Fujitsu Group Sustainability Report (Titles)	United Nations Global Compact
	Disclosure on Management Approach	<ul style="list-style-type: none"> • Our Corporate Philosophy "FUJITSU Way" • CSR Policy • Quality Initiatives • Information Security "Personal Data Protection Initiatives" 	-
Customer Health and Safety			
PR1	Life cycle stages in which health and safety impacts of products and services are assessed for improvement, and percentage of significant products and services categories subject to such procedures.	<ul style="list-style-type: none"> • Quality Initiatives "Customer-Centric Quality Assurance Activities for Products and Services" • Green Procurement with a Centralized Global Procurement System • Reducing Chemical Substances in Products 	9
PR2	Total number of incidents of non-compliance with regulations and voluntary codes concerning health and safety impacts of products and services during their life cycle, by type of outcomes.	-	-
PR3	Type of product and service information required by procedures, and percentage of significant products and services subject to such information requirements.	-	-
PR4	Total number of incidents of non-compliance with regulations and voluntary codes concerning product and service information and labeling, by type of outcomes.	<ul style="list-style-type: none"> • With Our Customers "Marking and Labeling of Products and Services Regarding Quality and Safety" 	-
PR5	Practices related to customer satisfaction, including results of surveys measuring customer satisfaction.	<ul style="list-style-type: none"> • Quality Initiatives "Satisfaction and Quality Surveys by Third-Party Organizations" 	-
Marketing Communications			
PR6	Programs for adherence to laws, standards, and voluntary codes related to marketing communications, including advertising, promotion, and sponsorship.	<ul style="list-style-type: none"> • With Our Customers "Directions in Advertising" 	10
PR7	Total number of incidents of non-compliance with regulations and voluntary codes concerning marketing communications, including advertising, promotion, and sponsorship by type of outcomes.	-	-
Customer Privacy			
PR8	Total number of substantiated complaints regarding breaches of customer privacy and losses of customer data.	-	-
Compliance			
PR9	Monetary value of significant fines for non-compliance with laws and regulations concerning the provision and use of products and services.	-	-

Fujitsu Group Sustainability Report Questionnaire Results 2012

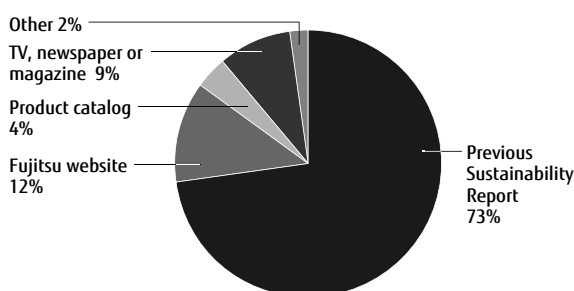
(As of July 2013)

Questionnaire tabulation results, Respondents =142

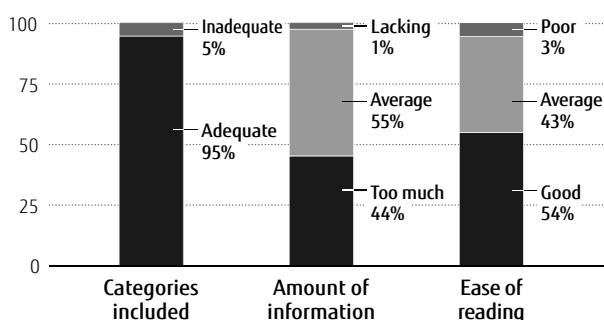
Q1 Did you know anything about Fujitsu's sustainability activities before reading the report?



Q2 (For those who answered "Yes" or "A little" to Q1) How did you come to know about them?



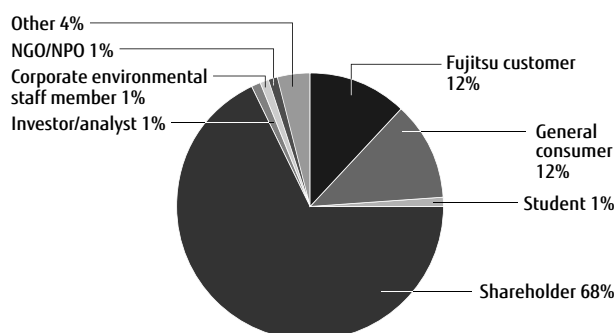
Q3 What is your impression of this report?



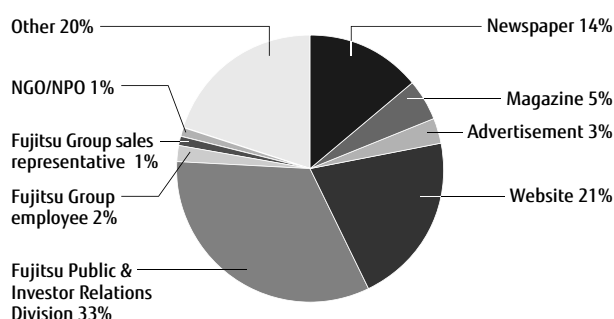
Q4 Which sections of this report were of the greatest interest?

Category title	Votes for this category
Special Feature: Fujitsu Envisions Smart Cities	61
Priority 1	60
Priority 2	58
Our Approach to CSR	48
Fujitsu Group Profile	46
Message from Management	45
Opening Discussion	40
Priority 3	40
Priority 4	37
CSR Activity Targets and Achievements	32

Q5 From what perspective did you read this report?



Q6 How did you learn about the existence of this report?



Feedback from the questionnaire was used to improve the Sustainability Report 2013 in the following ways:

- We stated clearly and simply the "Three Powers of ICT" (The Power of ICT for sustainability and beyond) for solving social issues. (p. 3 – p. 6 of this report)
- Since the booklet was reviewed last year, we reduced the number of pages and transferred detailed information to the website.
- We added a Web-based questionnaire, thereby increasing the number of questionnaire respondents. (20→142)