Interview to Head of Corporate Environmental Strategy Unit

Special Feature: Human Centric Intelligent Society Fujitsu Group Environmental Action Plan Stage VII

Chapter I Contribution to Society

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Interview

The Head of Corporate Environmental Strategy Unit Discusses

Fujitsu's **Environmental** Management



and Empower Human Creativity

Climate change presents a challenge on a global scale. "Mitigating" global warming from emissions of GHG is a matter of course, while it is also extremely important to pursue measures for "adapting" to the various effects that climate change has on abnormal weather, natural disasters, water resources, food supplies, health, etc.

Leverage ICT to Solve Global Issues

The Fujitsu Group is leveraging ICT to empower people to handle these types of challenges. In addition, we, and our diverse stakeholders, are working together from mid- and long-term perspectives to generate systems and solutions that contribute to solving issues.













Shown are photographs taken by Fujitsu Group employees for the annual company Environmental Photo Contest.

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Amidst the Concern over Climate Change and Other Environmental Challenges, How Can ICT Contribute?

Climate change's major risks for multiple domains and regions



Compiled by Fujitsu based on the IPCC Fifth Assessment Report

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ICT Can Contribute by Empowering the People Striving to Overcome the Various Issues Arising in Conjunction with Climate Change.

At the end of 2015, COP21 (the 21st session of the Conference of the Parties to the United Nations Framework Convention on Climate Change) is scheduled to be held and an agreement is expected for general countermeasures against climate change and global warming from 2020. Also in 2015, the UN summit in September is expected to adopt the "post-2015 development agenda" summarizing the social and environmental challenges that our global society will need to solve.

Given this context, it is arguable that there will be a shift toward stronger actions at global, national, corporate, and individual levels to work together toward solving social and environmental problems. According to the IPCC's (Intergovernmental Panel on Climate Change) Fifth Assessment Report, there is a need to undertake reduction of GHG emissions and to make greater efforts to "mitigate" global warming. The IPCC report further discusses the necessity of "adaptation" to the effects of global warming. It is also important that we consider and enact countermeasures against issues related to crops and water resources, natural disasters, health issues and other impacts created by climate change.

ICT has been able to promote the efficient use of energy and resources in lifestyles and industries, and by doing so has

contributed to the reduction of GHG emissions. At the same time, we believe that ICT can also make great contributions in the increasingly important aspect of "adapting" to the effects of global warming. ICT enables speedy collection and analysis of complex and voluminous information, providing support for the decisions and actions of people.

ICT can be used to provide, for example, not only more visible representations of various types of data collected with sensors, but can also be used to forecast future changes, toward which actions can be taken. In other words, events and things in the world can be connected to the conduct of people and creativity can be empowered by leveraging ICT.

Yet an even broader perspective than this is necessary. Fujitsu has received the following advice from an informed expert: "Since Fujitsu is a leading ICT company, it should connect the entire industry, or society, to create platforms and systems for addressing various issues." We share this opinion. We are looking at the possibilities for collaborating with other industries and building ecosystems. Going forward, we will work from mid- and long-term perspectives to adopt a broad vision and deliver systems and solutions with great value. This is nothing other than the new value-creating "human centric innovation" promoted by the Fujitsu Group.

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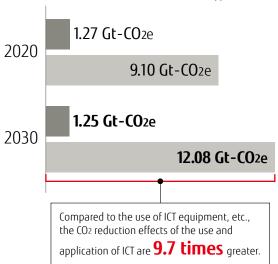
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On the One Hand ICT Contributes to Reducing Environmental Impacts, but Doesn't ICT Also **Exhibit Negative Aspects?**

CO₂ Emissions Volume of ICT, and the CO₂ Emission Reduction Effect of the Use and Application of ICT

- CO₂ emissions from the use of ICT equipment, etc. ("of ICT")
- CO2 emissions reduction effect from the use and application of ICT ("by ICT")



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

This is the Reason for a Need to Take Action from the Two Standpoints of Reducing Fujitsu's Environmental Impacts to Near Zero and Helping Customers and Society Reduce Their Impacts.

The global population of Internet users now exceeds 2.7 billion people and services such as those using cloud technology are growing widely. The age of the Internet of Things (IoT), in which automobiles, appliances, wearable devices, and all manner of things in the world connect over networks, is said to be upon us, and the number of things connected worldwide over the Internet is predicted to increase from 10 billion in 2013 to 50 billion in 2020.

Amid these conditions, ICT is, as mentioned previously, expected to play a role in empowering the human creativity that will change the nature of lifestyles, business, and society for the better. At the same time, however, it is a fact that GHG emissions increase due to the spread of ICT. Even if the amount of GHG emissions by individual devices is small, if their number is large, the total emissions will be enormous.

Two standpoints, "by ICT" and "of ICT," are necessary in order to address these positive and negative realities and to reduce the total environmental burdens of ICT. The use and application of ICT contributes to the reduction of environmental impacts in society overall (which is what we call "by ICT") and positive effects expand. At the same time, we must reduce the GHG emissions that accompany the use

of ICT devices ("of ICT") and minimize negative effects through efforts such as the provision of environmentally considerate products.

The Fujitsu Group has taken an early lead in basing initiatives on the two standpoints of "by ICT" and "of ICT." An example of this is our datacenters. Datacenters operate efficiently, aggregating customers' servers and other equipment, and thus contribute to reducing the overall GHG emissions of society, though an increase in the number of datacenters also adds to GHG emissions.

The Fujitsu Group operates more than 100 datacenters throughout the world and, in anticipation of the coming age of the IoT, has plans to further increase that number. Each of our major datacenters has set environmental targets and is working to improve its environmental performance, starting with energy efficiency. Needless to say, the servers and other products inside each datacenter are being designed for maximum environmental performance.

By accelerating these efforts from here on out, we will work to reduce our own environmental impacts to near zero while further contributing to the reductions of GHG emissions by customers and society.

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How is the Progress of the **Environmental Action Plan** (Stage VII)?

Changes in the Fujitsu Group Environmental Action Plan



Stage VII (FY 2013–2015)

Highlight the contributions from our business operations

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



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

Stage I-V (FY 1993-2009)

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

We Have Achieved All of the Annual Targets in Each Category and Have Revised Upward Our Targets for GHG Emission Reductions from the Provision of ICT.

The Fujitsu Group launched the Environmental Action Plan (Stage VII) in FY 2013. In the Stage VII plan, we have made the contributions of our business activities more clear, reaffirming that our business contributes to reducing the environmental burden of customers and society and thus contributes to sustainability of the planet, while also reaffirming that our contribution is great in comparison with the impacts we place on the environment.

In particular, as the use of ICT cannot be separated from the use of electric power, the impact of Fujitsu Group's business on the environment, whether negative or positive, is most dependent upon energy consumption and the subsequent emission of GHGs. For that reason, we emphasized the importance of reducing GHG emissions in our Environmental Action Plan (Stage VII), and are focusing on providing solutions able to contribute to the reduction of GHG emissions by customers and society, as well as on developing and providing energy-saving and resource-saving products.

So far, two years of Stage VII have been completed and FY 2015 will mark the third and final year. For our focus initiatives of "GHG emission reductions through the provision of ICT" and "designing and delivering eco-efficient products: resource efficiency," we have posted results equivalent to those targeted for the end of FY 2015 and, accordingly, have revised our

targets upward. With regard to other categories, we have achieved all of the FY 2014 targets. In FY 2015, we certainly plan to reduce GHG emissions through the provision of ICT, while also further strengthening energy saving performance at the previously mentioned datacenters.

To realize a sustainable society, we must work toward not only energy conservation but also creation of technologies and solutions to address the host of social issues brought about by climate change, population increase, the aging of society, and other changes. The Fujitsu Group will continue to expand the solutions we provide that contribute to sustainability and we will actively push forward technological developments to make that possible.



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Reducing Our Environmental Burden

Please Explain the Environmental Action Plan (Stage VIII) Starting in FY 2016 and the Future Direction of Environmental Management.

Holding environmental dialogues



Fujitsu is holding on-going dialogues involving external experts to deliberate on solutions to environmental issues and to discuss the direction of the Group going forward. (See Page 50.)

Concluding the Dialogues

Comments from Minoru Takeno, Head of the Environment Strategy Unit

We will continue to execute matters, such as compliance, etc., that are simply fundamental to our business. On top of that, we think that it is important to show how we are working to refine the superiority and distinctiveness that form the ideal that we are striving for as the Fujitsu Group.

It is important for each and every employee to have an awareness, with respect to the people who will be alive in 2050, 2100, and beyond, of how our responsibility to preserve the Earth is tied to our decisions and actions today. I believe that we need to continue to pursue our internal education in order to share this idea.

We are Deliberating on Those Items from the Two Standpoints of Continuing our Current Activities and Defining the Mid- to Long-Term Presence that We Want to Have.

At the moment, we are discussing Stage VIII of the plan while organizing the results and challenges from Stage VII. Focus will be placed on the continuing global priority issue of reducing GHG emissions, just as was the case with Stage VII. Going forward, however, there is a trend of increasing demand for managing and reducing absolute GHG emissions through independent efforts, rather than only making improvements measured per unit of sales. In formulating Stage VIII of the plan, we must take this demand from society into account.

At the same time, there are increasing movements by customers toward recognizing environmental benefits as a new kind of value. Needs are increasing for solutions that improve environmental performance and contribute to reducing environmental impacts. Responding to these needs and providing products and services in key domains with growth strategies will both solve environmental issues and expand business. This is also the direction of environmental management in the Fujitsu Group.

At present, we have identified technology solutions focused on cloud, mobile, big data, and security as one of our growth strategies in the Group. For example, after implementing solutions leveraging big data within the Fujitsu Group, then analyzing and evaluating the benefits for reducing environmental impacts, it is possible to make proposals to customers using reference models

incorporating the expertise from those solutions.

In addition, another of our major growth strategies is to strengthen our global expansion. In the future, all of our business activities will see further progress in global collaboration. In our Environmental Action Plan as well, we have not divided Japan and overseas into separate categories since Stage VII. We would like to further develop this approach in Stage VIII and use feedback from associates overseas to pursue an action plan and targets that presuppose the global expansion of the environmental value of our technologies, products, and services.

As such, Stage VIII will naturally be based on growth strategies that take into account the results of Stage VII, and we plan for it to also incorporate even more mid- and longterm perspectives. Internal discussions are focusing on the presence that the future Fujitsu Group would like to have in 2030, 2050, and beyond. Backcasting from those time points, we are considering what we must do and what targets we must accomplish each year to reach that reality, and then we are building the answers into Stage VIII of the plan. Reflecting the two perspectives of our accumulated activities to this point and the future presence that we are striving for, we are crafting an internally consistent Environmental Action Plan Stage VIII and will continue to make contributions to our customers and to society.