The Computerworld Honors Program

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Final Copy of Case Study

YEAR:
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STATUS:
Laureate

Project Name:
Great East Japan Earthquake Response Program

What social/humanitarian issue was the project designed to address? What specific metrics did you use to measure the project's success?

At 2:46 p.m. on March 11, 2011, a magnitude 9.0 earthquake, the most powerful ever measured in Japan, occurred with its epicenter off the Sanriku Coast of Miyagi Prefecture. It produced severe tremors throughout wide areas of the Tohoku region. A huge tsunami accompanied the earthquake, causing major destruction along the East Japan coast. Immediately after the earthquake, Fujitsu formed a Central Disaster Response Headquarters headed by the president. The task force consisted of two units, one to support in-house restoration (Restoration Headquarters), including the corporate affairs and human resources group, facilities group and ICT infrastructure group, and the other for restorative measures taken by departments (Disaster Response HQs) to support customers, plants and R&D locations. The two units coordinated their efforts to ascertain the safety of group employees and customers, and started to collect damage situation reports. Based on the information collected, meetings were held using teleconferencing, and the appropriate measures to be taken for our own and our customers facilities were decided for the group as a whole. Fujitsu marshaled resources to support the restoration of daily life and to rebuild the social infrastructure in the disaster area. At the same time, we offered products and services that provide customers with safety and security in the face of natural disasters. Fujitsu has over 50 business locations in East Japan, and their lifelines (electricity, water and gas supplies) were interrupted, and with damage to buildings and facilities, a number could no longer function. Locations in the Kanto region were also affected by rolling power cuts. However, of the nine manufacturing plants in which operations were affected, all-out company efforts successfully restored the last of them, Fujitsu Semiconductor Technology, to 100% operation by April 20, since when all have been operating normally.

Please describe the technologies used and how those technologies were deployed in an innovative way. Also, please include any technical or other challenges that were overcome for the successful implementation of the project.

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Fujitsu developed a free-of-charge cloud service support program comprising 12 cloud services to companies, local authorities and other organizations engaged in restoration. In addition to servers, storage and other infrastructure, we provided SMS, e-mail, web conferences, e-learning and other SaaS applications. In assessing disaster damage, good use was made of satellite mobile phones, MCA wireless links, and SaaS-type applications such as CRMate in acquiring and sharing up-to-date information. Employee safety was confirmed by using the existing emergency communication network, while simultaneously utilizing emergency communication and safety checking cloud services proven in disaster prevention drills, etc. In order to grasp accurately the state of damage at customers' locations and plan restoration, Fujitsu established a Customer Restoration Countermeasures HQ in the maintenance division where their maintenance information was stored, and two On-Site Restoration HQs, one in Saitama City and the other in Sendai City, to support the work of the unit. Information was shared with all the departments involved using a disaster damage website that collected information on customer damage and restoration, and the maintenance situation. After the earthquake, satellite images were provided by Japan's Earth observation satellite, "Daichi," and data was provided by other countries. This initiative is an international cooperation project under the auspices of the Japan Aerospace Exploration Agency (JAXA). This project shares satellite images of typhoons, floods, earthquakes, tsunamis and other natural disasters in the Asia-Pacific region on the web, and enables prompt disaster responses in each nation. Fujitsu's support for the project includes developing the Sentinel Asia STEP-2 system and providing the integrated BI.DAN-GUN high-speed file transfer solution.

Please list the specific humanitarian benefits the project has yielded so far.

Fujitsu has an established track record of providing on-site cloud-based services for the early detection of infections of foot-and-mouth disease and avian influenza, rapidly providing information to prevent the spread of epidemics. Drawing on this experience, teams went into action on March 13, two days after the earthquake, acutely aware of the importance of gathering and sharing information. Two weeks later, Fujitsu was able to provide a system based on the folders of paper notes initially compiled by TSUNA-PRO staff. With the TSUNA-PRO cloud services, they are now able to follow and rapidly respond to the continually changing needs of evacuation centers. In areas affected by planned rolling power cuts, Fujitsu provided on the website details of items to be checked and handled properly before power interruption to ensure that customers' systems could be restarted safely and operate normally after power was restored. To enable those living in evacuation centers to rapidly access information using the Internet, Fujitsu loaned 2,000 PCs free of charge to over 100 centers. These were used for free access to the Internet. Fujitsu used Internet TV capabilities to let people view local TV programs, and linked the TV stations with evacuation centers in Saitama Prefecture by providing live on-demand equipment free of charge. This enabled those evacuated outside the disaster area to keep up to date with information on events within the area and to send information intended for the evacuees. Fujitsu companies sent donations of over 200 million yen. In addition, the sum of the donations by staff exceeded 100 million yen, and this was delivered to the disaster relief headquarters in each prefecture. Fujitsu will continue to support the work of disaster recovery and rebuilding through services that address real on-site needs.

Please provide the best example of how the project has benefited a specific individual, enterprise or organization. Feel free to include personal quotes from individuals who have directly benefited from the work.

For the people of Japan and around the world, we provided real-time information using satellites, Internet, mobile phones, SAAS and cloud. Employee safety and security were very important, and our solutions assisted in determining the situation. Immediate benefits for disaster response and emergency procedures. Financial assistance for immediate needs and ongoing efforts in the

longer term rebuild. Two days after the earthquake, System Engineer Naoaki Noguchi began working to support Japan in the aftermath using ICT by proposing a free service to support the shelters for the Emergency headquarters. In the two months after the earthquake, he was involved in three main areas of support, supporting the Ministry of Agriculture, Forestry and Fisheries in accepting of victims into rural areas, the management of disaster relief volunteers and the management of relief supplied in Sendai City. "I would like to keep looking out for my customers in the affected areas for the next two years," says Noguchi "We wanted to deliver relief supplies to Tohoku where logistics were completely severed." The president of one of our business partners, JGS Soft K.K. Mikio Gamo, took the lead. The Tohoku Expressway was damaged by the earthquake, but President Gamo personally drove the truck to deliver the relief supplies. When driving on such damaged roads, his car navigation broke. He left at 0500 and it was after 2100 when he arrived. Electricity and gas were stopped, there were no baths or food. The following day, when he was unloading the rice from the truck, an elderly couple came up to him and asked him if he could give them some rice. "I had no choice but to say no, but it was so difficult it brought tears to my eyes," said President Gamo.

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