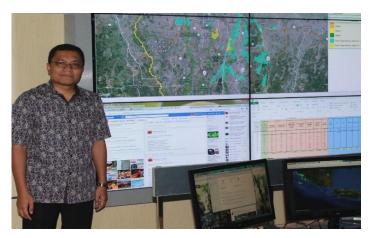# FUJITSU

Case study
DKI Jakarta Regional Disaster Management Agency

»DIMS has helped BPBD DKI Jakarta in accelerating information management during disaster mitigation, particularly during severe flooding that hits Jakarta«

Edy Junaedi, Head of Informatics and Controlling Division, DKI Jakarta Province Regional Disaster Management Agency (BPBD)

The customer

Country: Indonesia Industry: Government
Founded: 2011 Employees: 40
Website: http://bpbd.jakarta.go.id/

The challenge

In DKI Jakarta Province, regular flooding hits the city and surrounding areas almost every year during the rainy season. This has forced the local government to take preventive and mitigation action. For instance, in 2002, 2007, 2012 and 2013, large-scale flooding hit Jakarta, affecting many people and impacting the local economy. As the economy and Jakarta's infrastructure continue to develop, increased damage and losses should be anticipated in the case of natural disasters. BPBD, as one of the most crucial organizations in Jakarta, requires an effective integrated disaster management system to manage regular flooding and other disaster issues in the region.

The solution

Fujitsu's DIMS, an integrated system of hardware and software designed to accelerate the management of information during the disaster mitigation process, was implemented at BPBD. The DIMS application combines Fujitsu's vast experience and advanced knowledge of disaster mitigation systems as applied in Japan, which experiences natural disasters with similar characteristics to those occurring in Indonesia.

The customer

DKI Jakarta Regional Disaster Management Agency (*Badan Penanggulangan Bencana Daerah* – BPBD DKI Jakarta) is a disaster management agency established in February 2011 under the Regional Governor's authority. The Regional Secretary is the ex officio Head Officer of BPPD, reporting to the Governor. This institution is responsible for determining the guidelines and directives on fair and equal relief efforts that include disaster prevention, emergency response, rehabilitation, and reconstruction. BPBD DKI Jakarta's mission is to protect the people of Jakarta through disaster risk reduction, to increase the people's readiness, and enhance the region's capacity for disaster management.

The challenges

The existing manual system at BPBD was unable to perform fast and accurate disaster mitigation actions and information assembly. For instance, it took 5 to 7 days to gather critical information about the disaster (e.g. level of inundation and affected locations), which created delays in the deployment process at BPBD stations and headquarters. This impacted the slowdown of overall flood mitigation process.

In addition, BPBD's own portal was often down due to overloaded server capacity. Thus, it prevented citizens from accessing real-time accurate information regarding the disaster. In fact, this issue ran contrary to State law no. 24 (enacted in 2007) on Disaster Mitigation, which clearly states that all Indonesian citizens have the right to acquire fast and accurate information from a disaster early warning system.

The solution

In light of this situation, BPBD DKI Jakarta needed to enable swift emergency response, and bolster the effectiveness and efficiency of disaster management efforts. Fujitsu proposed BPBD adopt the Disaster Information Management System (DIMS) application, which includes functions that can manage damage and shelter information, displayed on a digital map, and can send out messages to staff and related disaster management organizations. Functions in DIMS applications are under the control of Pusdalops (Jakarta Operation Controlling Center – JOCC), which acts as a subordinate to BPBD DKI Jakarta. Fujitsu's solution helps BPBD to effectively collect and distribute relevant information to specific receivers. Fujitsu also developed BPBD's web portal to improve information dissemination and eliminate the problem of overloaded access. Fujitsu will also provide consultancy and support services during the critical periods, including high-speed response on technical support related to system and hardware maintenance.

The benefit

- BPBD's IT system is now more effective and enables them to increase capabilities in handling disaster information management.
- DIMS application plays a significant role in the acceleration of information assembly and distribution during the flood mitigation process by establishing a fast and accurate early warning system to speed-up the overall disaster management process and recovery.
- BPBD is able to provide more detailed information to fulfill needs of other agencies in real-time and with high accuracy.

Products and services

- Fujitsu Disaster Management Information System Application
- Fujitsu server PRIMERGY RX300
- Fujitsu 20 Inch Monitor EM2010W
- Symfoware Server Standard Edition Processor License
- Fujitsu Interstage Application Server Standard-J Edition Processor License
- Development of BPBD Web Portal
- Planning and Consulting
- System Infrastructure Building
- Application Development / Solution Introduction

The benefit

BPBD DKI Jakarta decided to implement DIMS because this solution is able to cover three phases of the disaster mitigation process - pre disaster, emergency response, and recovery. In addition, it supports portals and offers comprehensive solutions with most competitive cost efficiency. The client also considered Fujitsu's extensive experience in handling disaster mitigation in Japan, which highlighted the quality and reliability of the solutions.

DIMS enables BPBD DKI Jakarta to more accurately and quickly collect and centralize disaster-related information, make crucial decisions and provide essential messages, such as early warnings, to disaster management staff and organizations.

"DIMS has helped BPBD DKI Jakarta in accelerating information management during the disaster mitigation process, particularly during the severe flooding that hits DKI Jakarta. When we still used manual systems during the 2013 flooding, it took 5 to 7 days to receive integrated data, such as flood points and inundated areas. Meanwhile, our web portal, which should provide information to the public, did not function effectively. However, with Fujitsu's support, during the 2014 flooding in January, we were able to obtain real-time information and distribute it quickly to ensure effective coordination in the whole disaster mitigation process," said Edy Junaedi, Head of Informatics and Controlling Division BPBD DKI Jakarta.

The DIMS developed by Fujitsu facilitates BPBD DKI Jakarta's performance in managing critical and accurate information of major importance in an overall disaster mitigation process. Its main features are the following:

- **Transmits accurate early warnings** - The system can manage information on the water level of rivers and can automatically send warnings to staff and disaster management organizations about the level of risk and areas likely to be affected in the event of a flood. The warnings speed up initial disaster management activities, such as evacuation orders and the establishment of the disaster countermeasures office.
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- **Makes collection and provision of information more efficient** - Collecting information from and providing information to disaster management organizations and citizens, requires much time and effort. Unforeseen contingencies such as staff shortages and an unexpected increase in response measures are a common occurrence during natural disasters. The system assists the operations of staff working at the disaster management command center by using registration information with entry forms and automatic data coordination with a portal web site.
- **Assists swift decision making** - Using functions that display registered damage and shelter data on digital maps, the system provides real-time information on the overall situation of the disaster, thus facilitating quick decision making

Conclusion

This DIMS application from Fujitsu has improved BPBD's response time significantly. BPBD is now able to provide more detailed information to fulfill the specific needs of other agencies in real-time and with high accuracy. As a result, coordination in the whole disaster mitigation process has become more effective and efficient.

DIMS played a significant role in the acceleration of information assembly and distribution during Jakarta flood mitigation processes in January 2014 by establishing an early warning system that was fast and accurate and thus able to speed up the recovery.

"Fujitsu's experience in providing DIMS for disaster management in Japan is a guarantee for us to implement a similar system in mitigating disaster in DKI Jakarta Province," added Edy.

About Fujitsu

PT. Fujitsu Indonesia was established in 1995 under the name of PT. Fujitsu Systems Indonesia. Headquartered in Jakarta with service centers in several cities (Surabaya, Medan, Makassar, and Denpasar) and more than 99 authorized service providers across Indonesia, Fujitsu Indonesia has a vision to become a provider of leading customer-focused IT, communications and business solutions. Certified ISO 9001:2008, PT. Fujitsu Indonesia implements a quality management system registered to international standards within the scope of IT solutions and services, and encourages the adoption of a process approach to improve customer satisfaction. For more information, please visit: http://www.fujitsu.com/id.