

# IBM provides critical aid to tsunami victims in southern Asia.

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## Overview

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### ■ Challenge

*In the wake of the disastrous tsunami in southern Asia, IBM needed to work quickly and effectively to provide relief to devastated victims and to rebuild critical infrastructure.*

### ■ Solution

*IBM created customized databases on the fly and deployed high-speed wireless communication systems to direct critical supplies to victims, locate missing children and reunite loved ones. IBM also trained local residents to improve management of the recovery effort and provided customized trauma counseling to address the emotional stress of the disaster on children and their families.*

### ■ Moving toward On Demand Business

*IBM plans to pull together the applications it developed in India, Indonesia, Sri Lanka and Thailand and, with the help of IBM Research and IBM partners,*

*create a tool that participating countries and United Nations agencies can use to develop procedures that will save lives during future crises.*

### ■ Key Benefits

- *Helped to locate more than 40,000 missing children during the first week*
- *Helped to ensure that victims received food and medicine as quickly as possible*
- *Provided access to critical information, enabling governments and relief organizations to better manage the recovery process*
- *Implemented a wireless communication system to provide vital voice and data accessibility to remote and heavily damaged regions*
- *Helped to stabilize operations and accelerate recovery*
- *Provided immediate help and ongoing support to traumatized children and families*



On December 26, 2004, a massive earthquake originating in the Indian Ocean triggered a tsunami that devastated many coastal and island communities in southern Asia. One of the deadliest natural disasters in modern history, the tsunami killed more than 280,000 people, injured tens of thousands, left more than one million homeless and orphaned thousands of children. As news of the catastrophe spread, IBM joined governments, humanitarian organizations and other corporations worldwide in mounting an enormous relief effort.

Within a few hours of hearing the first news reports about the tsunami, Robin Willner, who was managing IBM's humanitarian response through IBM Global Community Initiatives, and Brent Woodworth, leader of the IBM Crisis Response Team, immediately began working together to develop IBM's response strategy. As IBM's first-responder organization, the Crisis Response Team assesses disaster situations, initiates essential services and outlines the company's broader relief plan, determining how to match crisis needs with available resources for the most effective response.

#### >> On Demand Business defined

An enterprise whose business processes—integrated end-to-end across the company and with key partners, suppliers and customers—can respond with speed to any customer demand, market opportunity or external threat.

*“When you’re looking into the faces of these children, you want them to have a better life, to help them survive and to help their families.”*

—Brent Woodworth, global manager,  
Crisis Response Team, IBM

Within the first 24 hours, the Crisis Response Team coordinated with IBM general managers in the affected countries to formally offer assistance to each government. At the same time, IBM employees throughout the region began to collect what amounted to more than ten tons of relief materials. Within 48 hours, IBM made its first grant of hardware and services to the Indonesian chapter of the Red Cross. The IBM Crisis Response Team initiated development of critical incident software with IBM teams in India and Thailand, who began to work on systems that were instrumental to the relief effort. By January 1, 2005, the IBM Crisis Response Team had secured the necessary invitations and permissions from senior government officials and was on the ground, ready to get to work.

### **Meeting critical needs with customized relief solutions**

Deployed to critical disaster areas in India, Indonesia, Sri Lanka and Thailand, members of the IBM Crisis Response Team arrived amid scenes of massive devastation. Lynn Klar of IBM Business Consulting Services comments, “Cars looked as if they had been run through a centrifuge; they were so twisted from the water rolling them across the roads. With fences and houses and boundaries gone, farm animals roamed the roads. There were very few motorized sounds for the first six weeks, since there was no gas and no one had jobs to go to. What was left of the urban landscape was dead silent—no air conditioners whirring, no cars, no generators. Just relief helicopters, cicadas and five prayers a day.”

Donated goods were arriving, but relief workers needed to know where victims were located and exactly what condition they were in to make sure that supplies were matched with people who needed them. Brent Woodworth remembers, “There were clearly major logistics challenges in getting food, drinking water and supplies to remote areas. Communications were highly disrupted because the tsunami had destroyed major portions of the lifeline infrastructure.”

IBM immediately set to work on a database to manage supply distribution and to track individuals in each village. “No one ever had a database like this,” Klar notes. “It was a census database with expansion capabilities. It included the standard information: name, address, how many people live in your home, how old are they. The expansion included their skills, the illnesses they had, if they were diabetic. Did we need to get insulin to a certain area? Who needs antibiotics or blood pressure medication in an area? We wanted to know not only where the survivors were, but also their capabilities so that when the kids got back to school, for instance, there was a database of people who might be able to teach, because many teachers did not survive.”

In each of the affected countries, IBM built customized applications and databases on the fly to perform critical functions in the aftermath of the tsunami. Within the first week, the tools helped to locate more than 40,000 missing children. Survivors were able to check registries to find out whether loved ones were safe. Relief workers could keep tabs on recovery projects to let evacuated villagers know when they could return home. The tools helped to direct transports of donated food to the hungriest camps, and to ensure that ailing survivors received the appropriate medicine and medical expertise as quickly as possible. To support education while schools were being reestablished, IBM donated KidSmart Early Learning Centres (Lenovo Young Explorer PCs with a Little Tykes interface and preloaded educational software) to sites throughout the affected region.

Since the tsunami had destroyed communication infrastructures, IBM set up high-speed satellite systems, known as SWIS (Secure Wireless Infrastructure Systems), to transmit key information from the database registries that IBM created. Prior to the implementation of the SWIS solution in Indonesia, relief workers operating in remote areas sent information to government officials via helicopter, since they had no other means of communication. The SWIS solution enabled communication in real time, boosting the efficiency of relief workers and improving their ability to respond when needed.

IBM developed the majority of its applications using open-source, interoperable technology solutions. By using transportable code that isn't tied to a specific platform, the company provided tools that online development communities could easily adapt to meet the evolving needs of the massive relief effort. Furthermore, open-source technology enabled local governments and non-governmental organizations (NGOs) to easily plug into IBM systems.

IBM also helped to address the needs of children and families who were facing the emotional stress and trauma associated with a disaster of this magnitude. IBM brought in highly skilled specialists, "Crisis Response Team Trauma Docs," to develop and teach customized courses in trauma management. IBM worked closely with government child-protection agencies to help replicate these skills to reach children living in relief camps and in multiple regions throughout the affected area.

In addition to providing technology services and equipment, IBM trained local residents to use all of the solutions it had implemented. By transferring its knowledge and skills, IBM helped to ensure that these systems would be effective even after the company had fulfilled its official commitments. Most important, the training sessions empowered tsunami victims to speed the healing and recovery of their communities.

*“IBM has a tradition of responding whenever there’s a disaster, whenever there’s a significant occurrence in the communities where we live and work. That’s part of being a good corporate citizen.”*

*— Robin Willner, Vice President, Global Community Initiatives, IBM*

### **A long-term commitment to humanitarian aid**

IBM spent US\$3.2 million on its tsunami relief effort, which involved more than 700 IBM employees, most of whom worked for stretches of three to four months. By creating data and communication systems that allowed governments, NGOs, the United Nations and other relief groups to access critical information, IBM provided the synergy needed to develop detailed, effective relief efforts.

Robin Willner comments, "IBM has a tradition of responding whenever there's a disaster, whenever there's a significant occurrence in the communities where we live and work. That's part of being a good corporate citizen." IBM formed its Crisis Response Team in 1993 to leverage the unique skills forged by the company's commitment to humanitarian aid. To date, the Crisis Response Team has provided relief assistance to victims of more than 70 disasters in 49 countries, acting as a first-line responder in New York on September 11, 2001, and working closely with the Indian government following the 2001 earthquake in Gujarat.

### **Enabling a more integrated, effective global response**

In conjunction with open-source software development colleagues in Sri Lanka—who assisted with the tsunami relief effort—as well as IBM Research and other groups, IBM will pull together all of the database applications used in India, Indonesia, Sri Lanka and Thailand. The coalition plans to develop a tool that participating countries and United Nations agencies can use to develop a set of procedures in advance of any future crisis situations and, ultimately, to save lives.

By working with heads of state, United Nations groups, the United States Agency for International Development and the United States Trade Development Agency, IBM has been able to participate in further discussions about combining public-sector responsibilities with private-sector resources in the event of a large-scale emergency. IBM's goal is to enable organizations from both sectors to immediately collaborate in a way that meets all needs across the entire scope of a crisis, without wasting effort or time. The IBM Crisis Response Team hopes that this forward thinking will inspire even more companies and organizations to pool resources and join in the effort to respond quickly and effectively to international disaster situations.



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