

## In Year of Disasters, Experts Bring Order To Chaos of Relief

*Logistics Pros Lend Know-How To Volunteer Operations; Leasing a Fleet of Forklifts Bottlenecks on the Tarmac*

By GLENN R. SIMPSON

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Amid the chaos of the huge Kashmir earthquake relief effort last month, an experiment took place in Hangar 14 of the Pakistan Air Force base in Islamabad.

Chris Weeks, an executive on loan from express-shipping company DHL Corp., worked with American soldiers to improvise a method for quickly getting food and shelter to some of the hundreds of thousands of quake survivors camping in remote mountain sides in the Pakistani province, where roads and airports are rare. Their solution: the "speedball."

They stuffed tents, food and other supplies into red polypropylene bags that DHL has been using for years to move loose cargo, tossed them into Chinook helicopters and headed for rough landing strips in the hills. In just two weeks, they delivered some 6,000 of the bean-bag-chair-size speedballs, each holding shelter, food and water to keep seven people alive for 10 days. "They would kick them out the door at landing strips," says U.S. Air Force Col. Richard Walberg, the officer in charge at the Islamabad base. "That was quite a system."

The bags are one product of an unusual effort by the global cargo industry to try to transform the notoriously inefficient world of disaster relief. A loose-knit collection of companies and executives are seeking to help governments and private aid groups respond more effectively to major disasters such as earthquakes, tsunamis and hurricanes.

They're applying to emergency-supply chains the nuts-and-bolts logistics techniques that helped revolutionize their industry and helped make global giants of companies like Dell Inc. and Wal-Mart Stores Inc.

Shipping companies like DHL and its competitor FedEx Corp. are experts in integrating technology with an almost militaristic level of organization to squeeze inefficiencies out of supply chains -- a notoriously balky aspect of commerce dating back to before the days of Asia's famous Silk Road. Most of the industry's expertise is in somewhat mundane areas like parcel-tracking, cramming lots of material into small spaces and routing jets. Many improvements are marginal, but the cumulative result is dramatic -- the ability to move huge loads across the globe with new speed and precision.

In a year of unprecedented calamities, that expertise is now in high demand. "The most important thing in a sudden disaster is logistics," says Adrian van der Knapp, who coordinates emergency-relief operations for the United Nations and helps DHL get quick government authorization to go into disaster zones. Aid groups and the U.N. are often deluged with donated supplies but struggle to get them where they're needed, he adds. "There is no U.N. fire brigade or standby army that can be called upon in natural disasters."

Enter Mr. Weeks, who in Kashmir was responding to his third major disaster since January. The 48-year-old Briton, who is based at DHL's vast hub in Brussels, went to Kashmir within days

of his return home from a U.S. Air Force base near Little Rock, Ark. There, he had been helping deliver foreign aid to victims of hurricanes Katrina and Rita. Before that, his team of about 35 veteran airport-cargo handlers took charge of aid operations for overwhelmed Sri Lankan authorities at Colombo Airport after the Indian Ocean tsunami. "We were not ready to receive all these flights," says Ari Hewage, the Sri Lankan Secretary to the Ports and Aviation Minister who nervously gave the corporate experts the go-ahead to take over.

The effort to bring modern shipping methods to disaster relief is largely the inspiration of a San Francisco cargo tycoon named Lynn Fritz. He sold his own company, Fritz Cos., to United Parcel Service Inc. in 2001, banked some \$200 million and started looking for a philanthropic enterprise. He soon became an evangelist for applying logistics techniques to the delivery of disaster relief, eventually founding the Fritz Institute, a nonprofit devoted to the cause. The slight, frenetic Mr. Fritz, 63, runs it from the suite where he lives at the Four Seasons Hotel in San Francisco.

"I did not just want to be a philanthropist that gave to local charities," Mr. Fritz says. "The supply chain for the humanitarian emergency is highly unpredictable.... We thought we could apply these skills with the help of the private sector."

### Long-Term Interests

The delivery companies also benefit because they often have long-term business interests in the efficiency of

transit hubs in disaster areas and the speed of their recovery.

DHL, a unit of Germany's Deutsche Post World Net, considers itself part of the emerging corporate good-citizenship movement, which is particularly strong in Europe. DHL has a large presence in developing regions where many suppliers to multinationals are based. That means making a visible contribution in such areas vital to its franchise, which depends on good relations with local port authorities.

Relief organizations today operate much like the technology industry used to. Just as parts suppliers are widely dispersed and often in competition with each other, aid groups are similarly balkanized. They seldom pool their resources, leading to wasteful duplication of effort and materials. Many are plagued by management problems such as inexperienced volunteers and lack of accounting systems and controls, which results in more waste and sometimes corruption.



DHL bags with relief supplies are offloaded from a helicopter and handed over to earthquake survivors in a remote settlement in northern Pakistan.

During relief efforts in Latin America following 1998's Hurricane Mitch, millions of dollars in aid were never delivered or accounted for, aid groups such as Oxfam charged. In Indonesia some

three months after the Asian tsunami, according to the U.N., relief supplies continued to clog key ports and many aid groups failed to claim their own goods.

Now, some people in the aid business think the tsunami, with its unprecedented level of destruction and global relief effort, could prove to be a turning point. "Because the tsunami was so big and so many people turned up on the scene, they got to witness firsthand what it was like," says John Rickard, logistics director at the New York-based International Rescue Committee. "Now they are much more willing to look at supply-chain issues."

The \$1 trillion cargo industry has become a repository of knowledge on how to move large amounts of goods to remote places in a big hurry. One key example at Fritz Cos.: In the early 1990s, the company re-engineered Apple Computer Inc.'s supply system. Instead of shipping directly to Apple, the company's legions of computer-parts suppliers in Asia sent their shipments to a warehouse near Apple's main plant that was owned and managed by Fritz.

The strategy allowed Apple to keep unused inventory off its books, use its factory space more efficiently and concentrate on making computers. "That has now become a standard in the technology-supply-chain world," says John Springer, a former manager at Fritz client Dell and now a top logistics manager for Nike Inc.

Mr. Fritz's idea was to bring the same regimen to disaster relief, using companies who already know how to do it and have a stake in a damaged region's recovery from disaster.

The first stirrings of interest in the industry occurred after a major earth-

quake in India in January 2001. Later that year at the World Economic Forum in Switzerland, an annual global confab, Mr. Fritz joined forces with Robert Prieto, chairman of engineering giant Parsons Brinckerhoff, and Uwe Doerken, then DHL's chief executive. They established the Disaster Resource Network, a group of multinationals that donate time and expertise to combat nature's worst strikes.

Mr. Fritz went on to found the Fritz Institute. One of the group's biggest projects is a free software program that aid groups can use to manage emergency response in the same door-to-door fashion that freight companies use to supply their customers. The International Committee of the Red Cross in Geneva put the software into operation for the tsunami. The system allowed the group for the first time to put donations and destinations together in one database so that it could quickly tell donors where supplies should be sent. "We have gained a fivefold efficiency compared to the older days," estimates Red Cross information technology specialist Sanjiv Jain.

### On the Ground

Mr. Weeks's Airport Emergency Team, founded in 2003, is one of the groups making the biggest difference on the ground. Mr. Weeks, a 25-year veteran of DHL, studied economics of developing countries in college, but in his previous post he pitched DHL's shipping service to fashion companies. He volunteered for disaster-relief duty as a change of career. "If I had known I was going to have three of these things in a year, I would have never opened my big mouth," he says.

Mr. Weeks's first close-up look at disaster came in 2003, when Bam, Iran, was hit by a devastating earthquake. Mr. Weeks flew to Dubai, home to an

important Middle East regional airport, to help direct aid flights to Iran. To his dismay, he found that most flights were turned away by Iranian authorities because the runways were blocked by planes being unloaded too slowly. Piles of relief supplies blocked the tarmac. With dozens of aid groups and governments flying in shipments and each one responsible for unloading its own planes, the Iranians had nowhere to land the flights. "I realized it was complete chaos at the airport," Mr. Weeks says.

Consulting with Mr. Fritz, Mr. Weeks organized a small unit of experienced cargo handlers that would focus on improving air-traffic logistics after disasters. Messrs. Fritz and Weeks rallied manpower and equipment donations from DHL, Emirates Airlines, shipping and logistics giant TNT of the Netherlands and others. The cargo-handling squad, mostly based in Dubai, is now on permanent standby for disasters.

The effort was put to the test in January after the South Asian tsunami. Alerted at his Brussels home base via email, Mr. Weeks assembled a team ranging from mechanics and forklift drivers to an accountant, each made available by large multinationals. A few days later, he arrived in Colombo, near many of the places hit hardest by the tsunami.

He found Sri Lankan troops were unloading each plane haphazardly onto trucks that then often had to be unloaded and loaded again to reorgan-

ize the cargo to leave the airport -- all out on the tarmac, right where planes needed to taxi and unload. Spotting a familiar chaos from Iran, Mr. Weeks persuaded the ministry of ports and aviation to reorganize the unloading process. "If they didn't get their act together at the airport they'd have an airport just choked up with freight," Mr. Weeks says.

Within two days, the government and the dozens of relief groups flying supplies into Sri Lanka all agreed to surrender their responsibility for offloading the planes to Mr. Weeks's team. For the first time, the team was able to keep track of precisely what had arrived. That allowed aid to be distributed rationally and let Mr. Weeks's team relay accurate data back to the U.N. and the Red Cross about the overall state of the supply chain.

#### **Simple but Crucial**

The first change was simple but crucial -- halting the practice of unloading the planes directly into trucks. That's a classic recipe for tarmac tie-ups: It blocks the landing strips so other planes can't touch down. "They think it's the most efficient way, but it's actually the slowest," he says. He directed the planes to taxi off the runway to an area where they could be unloaded in a more orderly fashion -- their contents transported into organized holding areas for later distribution. The other improvements amounted to the relatively prosaic inventory and warehouse management methods practiced by large shippers.

After Hurricane Katrina, Mr. Weeks's team swung into action to help with shipments of foreign aid at Jacksonville Air Force Base near Little Rock. Requisitioning a fleet of flat-bed trucks, the team of 20 DHL volunteers moved some 3,000 tons of aid to neighboring Louisiana over about three weeks.

Mr. Weeks was just settling back into Brussels when the Kashmir earthquake struck last month. Within days he was in Islamabad. "The airport is like M\*A\*S\*H at times with the choppers coming in," Mr. Weeks wrote in an Oct. 20 email. "Every day throws up new issues."

It was a familiar scene. "Everything was dumped in piles. You couldn't even get into the warehouse," he recalled later. The team brought in 300 pallets from Lahore, leased a fleet of forklift trucks and went to work. Making a virtue of necessity, the team created a "virtual hangar" in a field, laying out stacks of tents and waterproof-wrapped blankets in neat rows, alleviating congestion in the warehouse. From there, military helicopters from Britain, Canada, the U.S. and several other countries ferried some 9,000 tons of aid to the hardest hit areas.

— Zahid Hussain and Eric Bellman contributed to this article.

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\*CORRECTION: Fritz Institute is run from its headquarters at 50 Fremont Street, San Francisco, CA 94105 with operations in Nairobi, Kenya and Chennai, India.