Relief organizations provide assistance to millions of people in desperate need, whether they're suffering from famine, victims of natural disasters, such as earthquakes, or displaced persons uprooted by civil war. But their core mission often suffers from inadequate logistics management.

Statistics from the International Red Cross and Red Crescent Societies show that in 2002, 608 million people worldwide—three times the average from 1992-2001—were affected by natural disasters, civil strife, famine and other catastrophic events.

Humanitarian agencies face many logistical hurdles—procuring and transporting goods to the region in need; ensuring adequate warehouse and transportation capacity at destination; dealing with customs clearance and cross-border issues; corruption; and equitable distribution of goods. Another major obstacle is the lack of effective technology to support procurement, distribution, tracking and tracing goods and information-sharing in the field.

That's particularly true with “last-mile” movements—getting aid from the final distribution point to the people in need. Aniya Thomas, managing director of the Fritz Institute, called that “the holy grail” of the disaster-relief supply chain.

Natural disasters and armed conflicts often damage or destroy roads, bridges, seaports and airports, complicating efforts to move relief cargo into the affected country or region. Even when the physical infrastructure has not been damaged, it's often inadequate to handle the delivery and transport of large amounts of cargo. Warehouse and transportation capacity may also be limited or non-existent.

In cases of civil unrest or conflict, there may be lack of national and local governments for humanitarian organizations to work with. Or they may have been so weakened that they are of little or no help. Corruption also affects how quickly goods can move and may even prevent cargo from reaching its final destination. International aid workers often wait weeks before receiving visas to enter some countries.
left: Refugees in Angola carry bags of flour distributed by the International Committee of the Red Cross.
	right: Red Cross officials distribute cooking utensils, blankets, buckets and other supplies to 2,000 families in Yalussaka in the Democratic Republic of the Congo.

For example, the Sudanese government blocked relief organizations’ efforts to help people in Darfur for months. Between October 2003 and January, the government blocked nearly all international assistance to a million displaced persons in Darfur, located in western Sudan, more than a thousand miles from any port. In early April, warring parties in Sudan agreed to a 45-day ceasefire in the region. Under the deal, the parties agreed to negotiate a definitive settlement of the conflict; to guarantee humanitarian access to the region; and to facilitate the return of refugees and displaced persons to their homes on a voluntary basis.

(Refugees are people who have fled to another country to escape armed conflict or persecution; displaced persons are those uprooted from their homes to other parts of the country.)

Making transportation arrangements for shipping goods to a region in need can be a time-consuming process. For example, Catholic Relief Services’ shipping department arranges and transports food under programs operated by the U.S. Agency for International Development and the U.S. Department of Agriculture programs. The vast majority of its relief shipments fall under USAID Title II, according to Patricia Engers, Catholic Relief Services’ director of shipping.

“Seventy-five percent of Title II shipments must be awarded to U.S.-flag carriers, which are very limited. That increases their ability to raise rates during times of heavy military or commercial traffic,” Engers said.

“CRS doesn’t get to choose the vessels. This is done through a tender bid process. The USDA and USAID then consolidate all PVO (private voluntary organization) shipments using types of packaging, destination and timing in order to award the bid to the carrier that will be able to provide the best service,” she said.

Non-vessel operating common carriers cannot be used under Title II, so often smaller shipments must be postponed until enough freight is available to fill a vessel, Engers said. Agencies will sometimes bite the bullet in emergencies even if they only have enough cargo to fill a portion of the vessel, but shipping then can be very costly.

“Each of the 20 country programs that we ship food aid to must have an understanding of the in-country issues before we can ship to them. There are host government agreements, duty-free status waivers, surveyor contracts and clearing agents that must be in place. Delays can cause charges that go into the tens of thousands,” she said.

“Each port has a unique way of handling shipments so having a network of logistics people and a good inland carrier is key in expediting the shipment,” she added.

Relief agencies often fly emergency supplies to help victims of natural disasters or to provide aid to regions far from any ports. USAID, for example, used charter aircraft to fly 1,500 rolls of plastic sheeting to provide temporary shelter for 150,000 people in Madagascar who lost their homes after two devastating cyclones earlier this year.

Aid organizations also resort to air shipments in regions where heavy rains make ground transport virtually impossible. In some cases, they will drop food, medicine and other supplies from the air, said Dave Coddington, regional representative for Southern Africa at Catholic Relief Services.

Humanitarian agencies often ask airlines such as FedEx to donate space on their aircraft. The American Red Cross, Heart to Heart International and ORBIS International all have alliances with FedEx, which ships around 4.5 million pounds of relief cargo annually. (Continued on Page 8)
About one-third of its donated shipping is designated for American Red Cross disaster response.

When FedEx provides airlift for international relief shipments, a logistics team — which includes FedEx's in-country contacts, global operations control, flight management, charter operations, community relations and relief organization staff — collaborate to work out all details in advance. Those details include landing rights, cross-border issues, customs clearance procedures, duties, visa requirements, off-loading equipment and warehousing.

FedEx's Latin America-Caribbean region has used aircraft that would normally have been on the ground at its hub in Toluca, Mexico, to make an one-day round trip to three disaster sites within the last five years, said Sandra Munoz, a FedEx spokeswoman. “FedEx management in Toluca worked with the Mexican Red Cross to determine the best use of cargo space according to needs at the disaster sites in El Salvador, the Yucatan Peninsula and the Baja region,” she said. By working closely with the Red Cross, FedEx was able to make a full plane available to transport 70,000 pounds of supplies, such as water, construction materials, dried food, blankets, sleeping bags and medical supplies, to these disaster sites.

Most of the emergency cargo that FedEx ships moves on its own aircraft. One challenge facing FedEx is that the pleas for assistance in shipping emergency aid exceeds its capacity. “It’s critical that we depend on the expertise and input of our (relief organization) alliances to determine exact needs in order to get the best use of our available cargo space,” Munoz said.

Technology in humanitarian aid services also is lacking, although some agencies are working to improve it.

“Technology is not a priority for relief organizations,” said Thomas of the Fritz Institute, a San Francisco-based nonprofit organization that helps humanitarian agencies develop solutions to infrastructure problems.

The lack of focus on technology stems in part from donor insistence that contributions go directly to beneficiaries rather than helping to offset administrative costs, including computer hardware and software. As a result, relief organizations are hard-pressed to invest in information systems and processes that will reduce expenses and make their assistance programs more effective over the long term.

“Manual processes are still dominant at relief organizations, and IT resources which could enhance information availability, reporting and learning are often not leveraged,” Thomas said. “Relief organizations don’t think about the ‘ideal system’ that will meet their needs, but tend to rely on a mixture of off-the-shelf commercial software that requires customization and homegrown systems.”

System deficiencies mean that procurement procedures often are difficult to enforce; tracking and tracing shipments is done manually using spreadsheets; and there’s no central database of history on prices paid, transit times or quantities received or purchased.

“In general, humanitarian relief organizations have focused on ‘getting the job done,’ and have put little effort into performance management, other than reporting to donors on the amount of relief and usage of funds for a given relief operation,” Thomas said.

This may reflect limitations of technology to process historical data in a usable way.

“The food logistics software that we currently use doesn’t give us historical data in a format that we can use for performance analysis,” Coddington said. CRS currently uses a tracking database that allows it to get reports on upcoming shipments; provides a management tool that ensures all milestones, such as carrier payments and claims, are met; and monitors the freight accounts and details shipments for finance, Engers said.

As relief organizations implement “backbone” information systems, they’ll be able to measure their own performance as well as that of suppliers and logistics service providers, Thomas said. “Relief organizations can identify and eliminate causes of performance breakdowns, as well as use analysis of current performance to inform continuous process improvements,” she said.

“Relief organizations are also starting to see that they can hold vendors accountable, and that they can develop supplier scorecards. They can develop metrics and baselines, for where they want to improve the velocity of their supply chain and to increase the effectiveness of using relief from donors,” she said.