HELPING THE HELPERS

Adaptive training combats silo behavior and communication breakdowns that bedevil humanitarian supply chains

By Bublu Thakur-Weigold, Jonas Stumpf and Stephan Wagner

Hardly a month goes by without us witnessing scenes of disaster somewhere on our planet. The images of Haiti, Syria and Nepal linger in our minds, only to be displaced by the next reports of humanitarian need. In fact, historical data confirm that disasters, be they natural (earthquakes or storms) or man-made (war and its aftermath), are increasing in frequency.

With every report, the urgent appeals resume. The media coverage implies that the biggest challenge of aid is the financing itself. However, as we enter the holiday season for many parts of the world, a glimpse into what happens with the many players who spring to action and to the funds once they have been collected suggest another story.

In the years that we have been working with humanitarian operations, we have become familiar with a hidden need behind the well-publicized emergencies – the need behind the need, so to speak. Contrary to the impression created by urgent campaigns like "Give now for Nepal!" the accumulated donations are prodigious, having grown eightyfold from under $2 billion in 2000 to reach $156 billion in 2014. Evidently, both private and public donors are giving generously, leaving many organizations, especially those run by the United Nations, cash-rich.

Rather, the challenge is how well these budgets are deployed to meet beneficiary need. Research indicates that 80 percent of all funds are spent by logistics teams, mostly because they are procuring the goods. Unfortunately, a staggering 40 percent of it does not fulfill its purpose and goes to waste.

Contrary to another common perception, the reason for this loss is not corruption, incompetence or disproportionately high overheads. The waste can be traced to the same kinds of inefficiencies that bedevil commercial supply chains: process dysfunction, silo behavior, redundant work and, especially, communication breakdown.

But unlike the most successful for-profit firms, humanitarian organizations do not usually attract top managers and supply chain experts, which puts the best practices of industry out of their reach. This is an avoidable tragedy since, with every penny put to proper use in getting the right goods to the right place at the right time, human suffering will be reduced.

At a 2012 workshop, the logistics director of the International Federation of Red Cross and Red Crescent Societies urged her peers to professionalize and to do more with less, reminding them that "the needy beneficiary cannot ask you to become more efficient so you can reach his uncle in the next village." This was our call to action.

Pragmatic solutions from the ivory tower

The Swiss Federal Institute of Technology (ETH) and the Kühne Foundation's HELP Logistics AG have been working together for the past four years to increase the efficiency of humanitarian logistics.

The Kühne Foundation does not fund relief operations directly. However, it does provide grants for training and consulting through its HELP Logistics AG program. On the other hand, despite its supply chain training prowess, the ETH is not one of the many universities that offer degree programs in humanitarian logistics. Nevertheless, the combined capabilities of the two organizations seemed to be a dream team: academic prowess and best practices, together with an extensive worldwide network and real-life experience in humanitarian work.

Early on, however, it became clear that ETH's commercial research findings did not quite fit the logic of nonprofit work. In many cases, the teaching material required a thorough "translation" before it could be delivered in the field.

To enable agile delivery and impact, team-based action learning combined with a version of MIT professor Jay Forrester's beer game proved to be a powerful way to drive the necessary improvements. Communication breakdown is arguably the No. 1 cause of inefficiency in humanitarian operations, and our own assessments confirmed that poor information flow, not knowledge gaps, compromised effectiveness.

Comparable to the commercial sector, education does not automatically trigger solution implementation. No single "boss" can command a global network of decision-makers to collaborate. There would have to be alignment and buy-in by the individual functions. Our workshops would also have to engage teams that were more heterogeneous than those who attend universities and prepare these trainees to implement change.

Although it is often misunderstood as a rehearsal of supply chain management, the beer game is a simulation of a dysfunctional distribution system, and (if not passively witnessed on a computer screen), one of the most compelling ways to experience how the distortion, delay and amplification of information causes systems to fail.

Humanitarian logistics have unique characteristics, like the built-in handoffs between headquarters (in quiet places like Switzerland) and the field, which is by definition in a disaster area with poor bandwidth and infrastructure. Firefighting, with its tendency to overreact and under-plan, is the very nature of most aid work. It is not surprising that reporting material count or beneficiary estimates in the heat of battle is perceived as irritating bureaucracy that distracts staff from the "real" work at hand.

It was our challenge to convince learners from a daunting range of professional and educational backgrounds that passing on information was as critical to the success of their projects as distributing the goods themselves. In this report from the field, we look back on what both our instructors and participants experienced over several years at several stations around the globe.

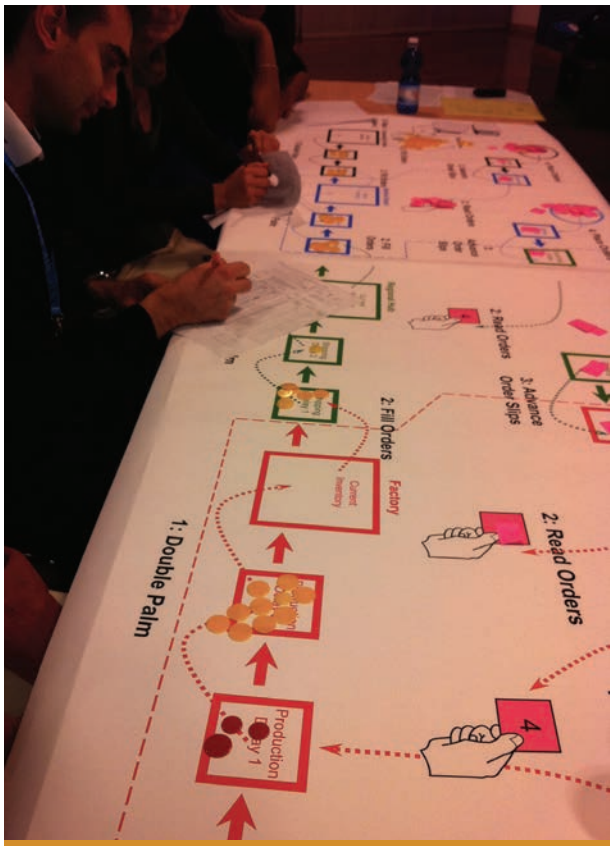
Station 1, Geneva: The instructors were on our home turf and felt confident that we had all the answers. How difficult could this be?

We played the original version of the beer game with a small, faith-based nongovernmental organization (NGO) that provides healthcare and sanitation to hot spots in the world. The game worked just as it had with our MBA students and commercial managers. The stock-outs and breakdown of trust were appalling.

But in this case, the players were unconvinced by the incentive to minimize cost. Why, they asked, should a high score (high costs) really lose? They were under pressure to spend all their budgets or risk losing them in the next round of funding. This time, the point of this organization's operations wasn't about cost-cutting – this was about saving lives.

Slightly chastened, the instructors went back to the drawing board to redesign plans for the future.

Station 2, Rome: A visit to the U.N. offices does not equate to a visit to your typical NGO. Instead, the instructors were dealing with a team of highly trained professionals accustomed to all the infrastructure that international politics can provide. This site is the nerve center of food distribution to the world's needy. The staff members carried blue passports and came, proverbially, from all corners of the earth.



Empty warehouses across the board mean hunger or worse for the beneficiaries of humanitarian assistance.

By now, we had redesigned MIT's original beer game to become the "high energy biscuit" or HEB distribution game, relabeling the nodes to reflect humanitarian nomenclature and reworking the debrief to address their practices. In this session, there was no argument about the need to control cost.

However, a silence briefly descended on the players at the one round in play when every single one of the four warehouses was empty. Stockpiles of biscuits were on the road between them. Without a word from the instructors, the consequences of the delays and demand distortion were all too clear to the participants. The cost of a stock-out would be hunger or worse. The lesson was learned.

Station 3, Juba, South Sudan: This time, training was happening in a war zone. This capital city had only two perpendicular paved roads, and some parking lots were guarded by small boys with large rifles. Our host NGO was to provide healthcare and water sanitation because epidemics spread when food is distributed to camps without latrines.

The international staff members were mostly university-educated, and one turned out to be a mathematician. In contrast, the national staff members in the classroom were those who had survived the conflict that had destroyed settlements and prevented them from completing primary school. Dur-

ASEAN government officials play the high energy biscuit (HEB) game, a version of MIT's beer game modified to fit the needs of humanitarian operations.

Revising ways to help refugees

As stories of refugees from Syria and other war-torn and impoverished Middle Eastern countries dominate the news, humanitarian relief agencies are examining their supply chain networks to improve their response.

CHEP, which provides pallets and container pooling, is performing an in-depth study of the United Nations Commission on Human Rights' global supply chain network, according to the 21st Century Supply Chain Blog run by Kinaxis, which provides cloud-based supply chain software. In addition, according to Kinaxis, the UPS Foundation has worked with UNCHR and the World Food Programme to deliver relief shipments to thousands of refugees in Greece and along the Macedonian border. On September 5, 163 metric tons of relief supplies arrived via air shipments, including 86 tons of high energy biscuits, 30,000 blankets, 25,000 sleeping mats and 1,000 solar lanterns.

Mobile technology is having its own effect on humanitarian supply chains. Refugees Welcome, a German website, has connected 222 refugees with accommodations from people who have opened their homes to displaced people. And Refugeemaps.org is an independent project that uses geospatial and technical knowledge to help support the humanitarian network for the refugee crisis in Europe. According to its website, the crowd-sourced online application addresses the need for the visual display of grassroots activity.

ing the class, not all of them could compute the simple sums to tally inventory, nor fill out the graphs. Our teaching skills were tuned to the needs of professional managers and had reached their practical limits.

Astonishingly, we saw that innumeracy doesn't have to be a barrier to ingenuity and improvisation. The teams understood the wild fluctuations of the graphs and welcomed the recommendation that they set up their game to win rather than to lose. The gaming behavior triggered by poor visibility and communication was all too familiar to them. It was a relief to learn that hostile and distrustful reactions could be the outcome of system structure (which could be fixed) and not always malice (which could not be fixed).

The graphs show that one well-performing calm manager (at node 1) can't prevent the interlocking system from going out of whack.

One of the local buyers made a neat diagnosis: "They always suspect that I am corrupt, and they unfairly correct my cash budgets, which, in turn causes me to over-request so I can buy the food we need. And then every number is wrong no matter what!" Again, lesson learned.

Station 4, Jakarta, Indonesia: Indonesia is in the heart of the typhoon and earthquake region. The news of our HEB simulation has spread, and the "Future Leaders of Disaster Management" of the ASEAN governments wanted to try it.

To increase preparedness, the government officials are planning centralized warehouses in a region where tropical storms hit with near predictable regularity. The game electrified the room, and indignant cries of "corruption" rose to a chorus. The delays and handoffs were wreaking their usual havoc: Players were struggling with a system that took 12 weeks for information to flow end-to-end, from beneficiary to factory and back. "Where is the material I ordered weeks ago, and what have you done with it?"

Although there were only four nodes to manage, supplies were running out at one node and piling up at another.

In this group, however, we had decision-makers who could influence how the international network was to be configured. We discussed how long their own supply chains were set up to be, how many handoffs were built in from the beginning and how demand information was being passed through the system.

They asked themselves how better collaboration between countries could be set up to avoid misunderstandings and mutual distrust. Don't communicate by passing only reports, lists or orders back and forth without explanation and context. The misinterpretation of upstream performance and the gaming that ensued (again, over-ordering because they did not believe that their supplier would deliver as requested) would have to stop. They left determined to put their pooled resources to better use.

Station 5, Brussels: This time, the training team was at a worldwide meeting of logistics officers of the same small faith-based NGO we began our program with. After playing the HEB game so many times, they now understand the value of managing the system and not just the sum of its functions.

One of our students, a former child soldier from South Sudan, offered to assist with the game because he had learned so much from it. He wanted to make sure the learning was passed on to his colleagues in Afghanistan, the Middle East and Asia. This was the last person we had expected to train the trainer, but he got the job done. And so, apparently, had we.

Looking back, looking forward

The special challenges of humanitarian logistics clearly are being taken seriously by educators and researchers alike. The growing array of training options for humanitarian workers is creative and diverse, ranging from e-learning from the Fritz Institute to applied academic programs like those at Georgia Tech and the University of Lugano. The ETH/HELP Logistics AG program completes its portfolio of training with agile workshops designed to improve continuously to support team-based action.

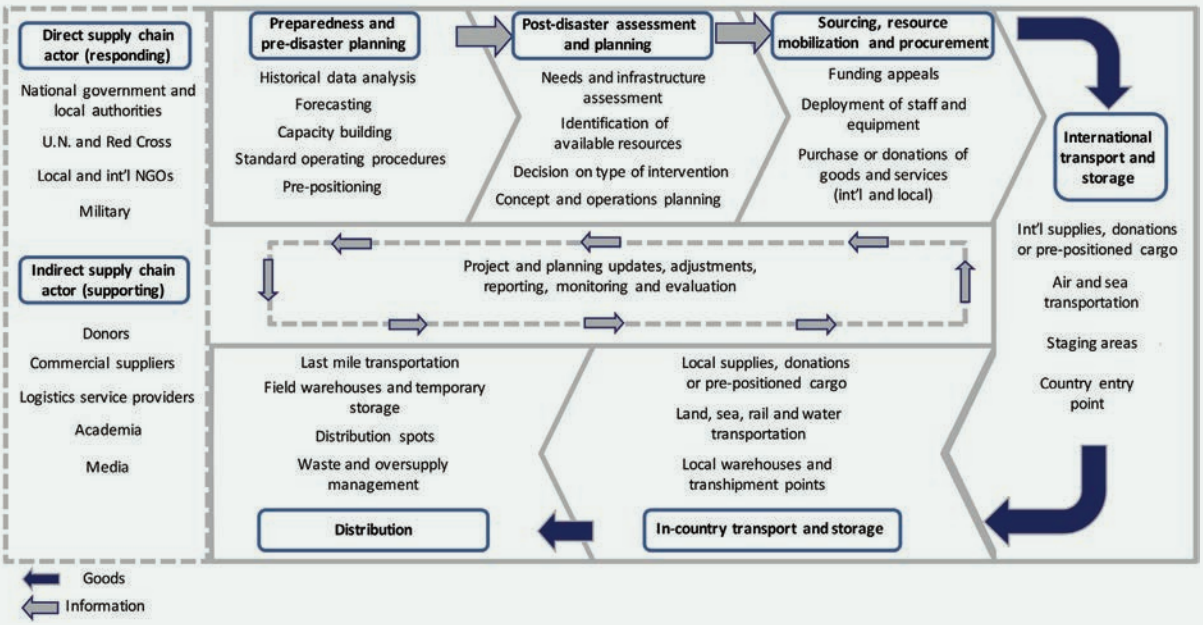
Our experiences often counter the assumption that the keys to a successful class lay with the quality of instructor or training content. Instead, we make several observations on instructional design. Action learning has proven useful, especially to mixed audiences, because it makes the educational qualification of individual participants irrelevant. Furthermore, we found that subjecting the group to well-orchestrated simulations of their own system (and not just rehearsals of individual transactions or scenarios) builds both judgment and shared incentives.

To create a common understanding of a complicated global system, the selection of class participants must be prioritized as

FIGURE 1

Complexity in action

A humanitarian supply chain is an interconnected system involving flows of goods, funds and data.



highly as training content. It was often a struggle to convince finance or programs staff to attend what is announced as a "logistics" class.

Yet if the learning group consists of only one function, the training might reinforce the silo thinking that is natural in specialized organizations, while implying that a single function (like logistics, which has the last "touch") is in control and alone accountable for delivery performance.

As practitioners and academics, we have worked with the U.N. and tiny NGOs, government representatives, well-meaning and diligent people from all walks of life and privilege. What surprised us most was the fact that skill gaps are not the most pressing problem they faced. Without well-managed information flows, their organization, natural turnover and process architecture can set up humanitarian logistics to fail.

Collaboration is not a natural impulse in a high stress situation, be it commercial or humanitarian. Communicating with order slips or reports is, however, natural and routine behavior. Changing this one habit has a disproportionate impact on system performance by reducing handoffs and delays. After almost two decades of playing the beer, and now the HEB, game, one of the most frequent comments we hear is how amazing it is that the bullwhip effect always kicks in with every single group of players, independent of individual talent, disposition, education, experience or managerial expertise.

Underlying this wonder is one of the most persistent false assumptions about systems performance: that a charismatic leader will make it work, neutralizing uncertainty. The shocking experience of the game, in which professors and CEOs alike fail, makes clear that no one decision-maker, however gifted, well-educated or strong-willed, can be held responsible for or maintain control of what is going on "across the board." Uncertainty, if allowed to propagate unchecked, will always exist and wreak havoc. Humanitarian supply chains, like their commercial cousins, are, as shown in Figure 1, a complex, interconnected system involving flows of goods, funds and data.

Conversely, even the smallest link in the supply chain can help to remove bottlenecks and expedite critical information so others can plan realistically and in time. This single insight can motivate all kinds of relief workers to reach out to a proliferating array of stakeholders: military and government representatives, local authorities, national and international suppliers, donors, partner organizations, clusters, transport partners and, of course, their own headquarters.

Improved collaboration can leverage the multibillion-dollar budgets in what some are calling the "humanitarian economy." No reduction of overhead or even corruption can compare. It's about unlocking the potential that was in their systems all along. ❖

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