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# **STANFORD** SOCIAL INNOVATION *review*

## **Q&A**

**William Brindley**

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## William Brindley helps international aid organizations use information technology to save lives.

WILLIAM BRINDLEY SPENT MOST of his career keeping financial institutions at the leading edge of technology. Now, as CEO of the nonprofit consortium NetHope, he is using those same skills to help nonprofits do the same. Brindley joined NetHope two years ago after a long career on Wall Street, most recently as a senior executive at Citigroup's Citi Private Bank. He also served as CitiBank's deputy chief technology officer where he helped manage the bank's global information technology (IT) systems.

NetHope was launched in 2001 by Edward Granger-Happ, another Wall Street veteran who was then running Save the Children's IT operation. What Happ noticed was that other international aid organizations were struggling with many of the same IT issues that he was, in particular how to provide computer and voice communications to field-workers in remote and often undeveloped parts of the world. His solution was to form NetHope, an organization that would coordinate the efforts of various aid organizations to jointly develop IT solutions that were better, more reliable, faster, and less expensive.

NetHope now has 25 member organizations, among them Save the Children, Mercy Corps, Oxfam, the International Federation of Red Cross and Red Crescent Societies, and Catholic Relief Services. Combined, these organizations operate in 180 countries, employ more than 300,000 people, and spend more than \$30 billion each year.

In this interview with Eric Nee, the *Stanford Social Innovation Review's* managing editor, Brindley explains why nonprofits are so far behind their for-profit counterparts in effectively using IT, how NetHope has helped its members close the technology gap, and what projects NetHope is working on now that will unleash the power of computing to solve some of society's most pressing problems.

**Eric Nee:** One of the first problems that NetHope tackled was to find ways to provide better connectivity for field-workers in remote areas of the world. Why was that such a critical issue?

**William Brindley:** In the developing world, frontline workers—whether they are researchers with the Nature Conservancy surveying remote jungles, engineers with

WaterAid building water sanitation projects, or aid workers with Heifer International helping women make a better life for their families—are often in distant places where the connectivity problems are very real. So the first problem we tackled was how to help these field-workers connect their computers to a network so they can access the information that they need to do their work.

**That's a huge issue, one that can only be solved by either the government or the private sector building out a communications**



**infrastructure. How can NetHope fix that problem?**

You're absolutely right. There are still remote locations in the United States where it is difficult to get connectivity, so it's going to continue to be a systemic problem in sub-Saharan Africa, South Asia, and elsewhere for quite a long time. What we've done is focus on some basic, bottom of the technology pyramid type of things. We have identified satellite companies that are now, for the first time, working with our group of nongovernmental organizations to make sure there is coverage in certain parts of the world. We are also pooling our resources to get the best deal, because it can be quite expensive to provide these services, particularly in areas where you don't have workers with the right technology skills.

Besides providing connectivity, we also

connection so that you could send and receive data and voice. To operate the device you had to connect it to a power supply, typically a truck battery. It was a great solution and our field-workers liked it.

But as with any first generation product, there were some design flaws. The main problem was that we needed to make it smaller and lighter, so we redesigned it. We are now in the fourth phase of the program. Today's kit weighs only a few pounds, so people can easily carry it through customs and into any location. It has a foldout umbrella with thin-film solar panels so that it generates its own power. And it costs only about \$4,000. Now our members can afford to buy more of these kits and bring them into disaster areas and get them up and running much more quickly, saving lives in the process.

with many of our other members, are also engaged in ongoing work in the developing world around health care, education, agriculture, microfinance, water sanitation, and the environment.

**What other programs has NetHope launched?**

Our initial programs focused mostly on building cooperation between organizations at the headquarters level, often among CIOs [chief information officers]. That was important to do because it had never happened before. Now we are trying to bring that cooperation down to the local level in areas like East Africa, West Africa, India, Bangladesh, and Sri Lanka, through our NetHope chapter program. We want to help our member organizations' professional field-workers—medical workers, educators, and the like—learn how to use technology more effectively. It's not enough for them to have the technology. They need to know how to use it.

To do that, we partner with technology companies like Microsoft and Cisco, both of whom have organizations dedicated to training people in IT. Our goal is to reach 100,000 professional field-workers over the next five years. We have three ways of delivering those skills: in-classroom training, online courses where the student works with a virtual instructor, and self-paced learning.

**Besides training, are there other ways that you are working with people in the field to help them make better use of technology?**

Our focus has been largely on the bottom of the technology pyramid, making sure that the basic infrastructure, utilities, and skills are in place. Now we want to take it a step further and provide the kinds of solutions that field-workers need when they are working in AIDS clinics or providing microloans in remote areas.

Until now, most of the technology solutions that have been developed for field-workers have been custom solutions developed for specific programs. The technology solution that an AIDS worker uses to collect data about the health of her clients, for example, is completely different from the technology solution that an agricultural worker uses to collect data about crop production. We think that the underlying plat-

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have to make sure that there are other essential pieces of the infrastructure in place, such as electric power. I was at a hospital in one of the most remote parts of Rwanda not long ago, and they have power only two hours a day. We try to get our member organizations working together to bring power to areas where they all have people working.

**These problems must be particularly acute during emergencies, such as typhoons, earthquakes, or tsunamis.**

After the earthquake in Bam, Iran [on Dec. 26, 2003], the emergency responders needed connectivity to coordinate relief supplies such as tents and food, but they had no way to do that. So they had to burn e-mails onto CDs and transport the CDs on donkeys to villages where they could then send the e-mails. People were perishing as this was going on. After that experience, our member organizations said, 'We need your help to come up with a solution to this problem.' What resulted is the Network Relief Kit. Initially the kit was a 50-pound ruggedized box that was built with our engineering friends at Cisco. It cost close to \$40,000, and it had a satellite

**How did the first version of the kit get designed?**

It was like a start-up in a garage. With funding and engineering support from Cisco, NetHope worked to develop and deploy the first two generations of the Network Relief Kit. These initial versions were designed to provide field workers with data communications. After field testing the kit, NetHope's emergency response team compiled a list of potential improvements. Later generations were expanded to provide voice communications and access to the Internet.

**How important is the Network Relief Kit to your members?**

Of course they are not just waiting around for disasters to happen. But some of our member organizations—like the Red Cross, Red Crescent, and International Rescue Committee—are very focused on being the first ones at an emergency or a disaster, or being the first ones to help refugees. Other of our member organizations do what you might call humanitarian emergency response—such as World Vision, CARE, or Mercy Corps. These organizations, along

form for these types of technology solutions can in many cases be the same, which will save money and make it easier to develop solutions for similar types of programs in other parts of the world.

What we need to be able to do is say, “How can we take this laboratory of innovation at the grassroots level and get repeatability, scale, and sustainable impact?” So that’s what we’re doing. We’re working, for example, with Catholic Relief Services and their



clients and predict outbreaks of sexually transmitted diseases, for example. It’s a transferable platform. We have Intel and Microsoft partnering with us. Their engineering expertise is crucial. They work together with our engineers to solve these problems so we can have repeatable solutions that can be taken to scale and reach the millions of people around the world who need them. That’s why we’re a public-private partnership, to be able to tap into

**If you’re at Save the Children and have an IT help desk, maybe you can join forces with your colleagues at Oxfam and Catholic Relief Services who also need a help desk.**

field-workers in five or six countries in Africa around the diseases that affect the cassava tuber. The cassava is one of the principal ways that people in that part of the world get their food. But the cassava has been hit by diseases that have wiped out whole crops.

Catholic Relief Services is a tremendously wired-in organization. They’ve done a lot of fascinating, innovative work over the years and pioneered a number of programs. Their goal in this project—which is funded by the Gates Foundation—is to enable 1 million farming families to improve their livelihoods and their security by controlling cassava diseases through better access to improved cuttings, which will lead to improved production and marketing of cassavas.

What they have found in this project is that there is an opportunity to develop a common technology platform, one that uses low-cost rugged laptops, a learning management system, electronic forms, and other technologies. This platform allows the field-workers to collect the data, see what the trends are, predict diseases, and prevent them from occurring. It also allows the donors to see exactly what’s happening in the project so that they get accurate and direct feedback.

**So that same platform could be used for other programs in other countries?**

That’s right. This platform could be used by AIDS workers to monitor the health of

their assets and business expertise and bring all of these resources together.

**Do your members have enough money to implement these programs?**

Gartner Group [a research organization] did a study of how much money commercial organizations spend on IT. They found that on average, businesses spent 3.9 percent of their operating budget on IT. We did an internal study of NetHope members and found that our organizations spent between 0.3 percent and 2.5 percent of their program revenue on IT. The average was 2 percent, or about half the amount that commercial organizations spend. Even if nonprofits tripled their IT spending, they would still be playing catch-up.

**Why don’t nonprofits spend more money on IT, particularly if it can help them increase productivity?**

It’s the tyranny of the pie chart. Donors often rank nonprofits by which ones spend more money on programs and less money on operations. As a result, many organizations are under pressure to underinvest in their operations and IT infrastructure. The other problem is that programs are often funded episodically—program by program—not systematically. So there may be a wonderful HIV program in Sudan and there may be a wonderful children’s program in Bolivia. But there has been no systematic investment in the technology that supports

either program. These programs very often involve some technology component, but the funding is only for that project, not for the integration of the technology.

**What can you do to change that?**

The way to solve it is for nonprofits to share. A lot of what NetHope does is putting people together. Who do you know? How do you find the expert to help with the problem? There’s also the hard side of cooperation where members pool their resources and aggregate their needs. If you’re at Save the Children and you have an IT help desk, maybe you can join forces with your colleagues at Oxfam, Catholic Relief Services, and Mercy Corps who also need a help desk. And by joining forces you can all get a help desk operating 24/7, 365 days a year, in five languages, for less money than you could separately. That’s pretty powerful.

We’re actually looking at a program like this in Nairobi. Our members started the program using their own time and money. We then received an extraordinary amount of help from Accenture to take us to the next phase. And now the Rockefeller Foundation is taking us to a whole other phase by providing money to help us lay out a road map of how we can make this a true enterprise service for our members and for others. We also have a pilot program in procurement that allows our members to aggregate their purchases of software, hardware, and services and get better prices.

**Are CIOs working at nonprofits more willing to cooperate than CIOs working at for-profits?**

I think so. I was on Wall Street and I know that there were collaborations among competitors in certain areas, such as computer and network security. They were often driven to cooperate because of necessity and in some instances regulation. I think you see more cooperation among CIOs in the nonprofit sector, though.

The CIOs who work at our member organizations are passionate about their work. Not just about IT, but about contributing to the betterment of humanity. When you have that kind of attitude and passion, then perhaps you are more willing to work with others to get the job done, because you’re really seeing a higher-order goal here. ■