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UNICEF'S NEW APPROACH TO INVESTING IN 'FRONTIER TECHNOLOGIES'

STORY BY KELSEY ALPAIO

# In

**2013, UNICEF stopped a disaster in its tracks—a bacteria that was on its way to destroying the banana crop in Uganda. With more than 14 million Ugandans eating bananas every day, the country had an epidemic on its hands. On some farms, 90 percent of the crop had already been completely destroyed. ¶ That’s when UNICEF, a United Nations humanitarian program, came on the scene. Using U-Report, an open source, two-way messaging platform developed in part by UNICEF’s innovation team, 190,000 Ugandans were sent a message via SMS with a simple question:**

***“Do you know any farmers whose banana plantations or crops are infected with banana bacterial wilt disease? YES or NO.”***

**Within minutes, they had thousands of replies and were able to build a map showing where the plague was hitting the hardest. And messages could be sent back to respondents, detailing how to deal with the plague and offering money from the government to compensate for crops that had been lost. ¶ According to Christopher Fabian, co-founder of UNICEF’s Innovation Unit and head of UNICEF Ventures, this is just one of the notable successes enabled by the organization’s “near-future sensing team.”**

Erica Kochi and Chris Fabian started UNICEF’s Innovation Unit in 2007.





# Innovation Labs

A Do-It-Yourself Guide



www.unicef.org  
UNICEF Volume #2 of many  
www.unicefinnovation.org

Handwritten notes on sticky notes:

- Blue sticky note: "Kat M.L.B. Unicef Innovation Lab"
- Yellow sticky note: "Unicef Innovation Lab"
- Pink sticky note: "I am a..."
- Pink sticky note: "I am a..."

“UNICEF is a legacy organization,” he says. “It was built 70 years ago, and it’s part of the UN. It’s an international organization, and it’s a bureaucracy. That’s how it was built. Our team is the opposite of all of that. We’re a team of 30 people inside of UNICEF...that helps UNICEF be prepared for what’s coming.”

### INNOVATION AT UNICEF

As part of the United Nations, UNICEF (The United Nations International Children’s Emergency Fund) works to provide resources to the world’s most marginalized children. The organization was started 70 years ago, and now employs 12,000 people in 190 countries.

But it wasn’t until 2007 that Fabian and Erica Kochi, who is now in charge of private sector partnerships at UNICEF, founded the organization’s Innovation Unit. Fabian and Kochi were eager to collaborate on overlapping projects (Fabian on a Wikipedia initiative, and Kochi on a partnership with “One Laptop per Child.”) They pitched their collaboration up and down the halls of UNICEF, until they got a bite from the Director of the Division of Communication, Sharad Sapra.

“[Sapra] saw us with our whiteboard and told us to come up with a business plan,” says Fabian. “We brought him one the next day. He said, ‘That’s not enough money. Double it. You both work for me.’ It wasn’t officially called the Innovation Unit until several years later...”

Now, UNICEF’s Innovation Unit and Fabian’s venture team are both focused on looking at the near future and anticipating challenges for marginalized populations.

“If you can think of the needs of a billion people, what are the things that are core problems?” says Fabian. “UNICEF’s focus has always been on that bottom 20 percent in income—the most marginalized people... We tend to talk and act very differently. We’re not into charity... We try to find things that can help build the businesses for our corporate partners, and also, at the same time, create good in the world.”

Fabian’s team has the first venture capital fund in the UN, and part of his role at UNICEF involves demonstrating that the organization can adapt to new needs, and is eager to engage with tech companies in the private sector. With \$11.2 million in the fund, UNICEF Ventures makes \$50,000 to \$100,000 capital investments in companies focusing on frontier technologies like artificial intelligence, genomics, and blockchain. So far, they have



Engineers from Google work with UNICEF’s innovation team to analyze data to map and anticipate the spread of the Zika virus.









invested in 43 companies, and aim to have a total of 60-70 companies in their portfolio by the end of 2017.

“We make small clusters of bets on companies that are working in those portfolios, but we do it only in the places that UNICEF works, so in emerging economies or developing economies,” says Fabian. “One of the nice things about having [190] country offices is that we also include China, India, and Brazil. It’s not only the super low-income countries, but we have some powerhouses as well.”

When placing these bets, Fabian’s team invests in a variety of companies in different countries working on the same technology—the goal being to connect these organizations and develop solutions more efficiently. One catch: all technologies that UNICEF invests in must be open source.

### THE FUTURE OF OPEN SOURCE

“I think open source is the single biggest idea of our generation,” says Fabian. “Most of the work that we invest in is pretty early stage and pretty infrastructure-level work... We can help companies go faster and advance their work by connecting them to other companies working on the same stuff in different markets... Any research we do, any collaborations we do, have to be public domain.

## Innovation Fund Investments

**ILHASOFT:** UNICEF has invested \$90,000 in Ilhasoft, a Brazil-based company working on an intelligent, interactive robot called “Push.” Push’s web platform enables users to talk to the robot, ask questions, and seek information interactively. This solution aims to address the growing market for chatbots, and solve challenges such as quick language translation.

**mPOWER:** mPower has developed the “Open Smart Register Platform,” a digital platform that aims to improve data collection and efficiency for frontline workers providing reproductive health and child services. UNICEF has invested \$98,000 in the Bangladesh-based company, and during the first six months of investment, the company has improved on current vaccination behaviors, formed government partnerships, and developed interactive visualizations based on testing results.

**SAYCEL:** SayCel provides communications solutions for poor rural communities in Nicaragua. With a \$99,000 investment from UNICEF, the team is working to improve cellular networks in rural regions. SayCel will increase infrastructure by installing low-cost technology and training local governments to maintain their own networks.

**EKITABU:** This Kenya-based company is developing a cross-platform e-reading app that provides better educational access for children with disabilities. With a \$35,000 investment, eKitabu’s app reads ebooks aloud for children with vision impairment. For the deaf or hard of hearing, the app also includes videos with sign language.

Otherwise, we get locked into a place where we’re working with a proprietary company on a proprietary piece of tech to save kids’ lives... That company goes out of business, and you’re totally screwed...”

But Fabian emphasizes that open source and for-profit success are not incompatible.

“Say you’re going to take two years to get to profit,” he says. “We can help you accelerate that to nine months by connecting you to other folks working on it. Then we can give you a better base intellectual property stack. Then, when you go for your second or third round of investment, you’re in a much healthier place.”

One arena in which UNICEF is currently investing is drones and unmanned aerial vehicles (UAVS). Drone technology fits the venture team’s goals, as an emerging industry that will impact information gathering and reporting after emergencies. Drones can quickly and safely fly into dangerous areas after disasters and collect information on the whereabouts of survivors; where the damage is the worst; and what areas need supplies first. In 2016, the consulting firm PwC estimated that the emerging global market for business services using drones is valued at over \$127 billion. According to Fabian, it’s a “sweet spot between what we consider big corporate interests and the interests of UNICEF.”

To foster relationships with companies working on drone technology, UNICEF invested \$100,000 to help set up a UAV testing corridor at Kasungu Airfield in Malawi.

“We can then go to industry—into big aviation, to startups, to groups working on control systems—and we can say, ‘Hey, you can have access to this, but you’ve got to be testing against problems that mean something to us,’” says Fabian. “It’s a total business proposition. We’re not trying to say, ‘Hey, do charity.’ We’re saying, ‘If you can come to Malawi and test your work, you’ll be able to prove out new use cases for your equipment. We can use that to grow your customer base... But, when you go there, you’ve got to do a few things. One, you’ve got to train a bunch of Malawian engineers. You have to go to the university and give a week of lectures. You’ve got to make sure that anything that you test, the outputs are public domain ... And you have to be a partner of ours in some way. You have to help our work moving forward.”

UNICEF Ventures has also been active in data science, with the goal of bringing corporations together to study human movement and stave off fast-spreading diseases.

“We try to de-risk the space enough for



UNICEF, because any big organization is super risk-averse,” Fabian says. “It’s the fundamental unifying factor among everybody. Then we try to create platforms where we get out of the way... Drones will not be something that ‘came out of Ventures.’ It will just be like, ‘In 2018, of course you use a drone to get real-time imagery anywhere in the world, and here’s some companies that you can do it with.’”

## **BUILDING THE RIGHT TEAM**

Fabian says that building a strong team is one key to keeping tabs on emerging technologies that may benefit the organization. And sometimes that involves changing your team composition to reflect changes in technology.

“My job is to help the teams that we have do their work well,” says Fabian. “We’re able to bring in the most incredible people I’ve ever worked with to work on these problems... We don’t hire people who want to come in and be 20 years in one place. Our agreement is, you come in, work with us on these incredible problems, and we’ll put you wherever you want.”

Fabian says that the structure of his team changes significantly almost every 18 months, both from an employee and organizational standpoint.

“You can’t be preparing for a world that’s coming if you’re stuck in something that was. That means that we hire a group people who are very different from the normal UN folks,” he says. “We try to pick different competencies and backgrounds. We tend to work in a very different style. We try to maintain the connection among a group of people on a project until that project can find a home somewhere. Then, we help those people go where they want to go, whether it’s stay with the project or move somewhere else [in the organization.]”

Fabian says that he is also working to change some of the human resources and internal systems at UNICEF as a whole.

“I think that I’ve seen a huge change in the last six years in the organization, in [terms of] the type of people that are being hired, in the way that people are talking about things, and in the general demeanor of staff towards the future,” he says. “We’ve been working with our human resources guys to...pay interns. Shocker. We weren’t allowed to do that before, but if you can’t pay interns, you just get a bunch of wealthy kids who don’t really need that opportunity anyway. If you’re paying people, you open that up a lot.”

## **‘THE WORD INNOVATION IS THE STUPIDEST WORD EVER’**

Fabian says it’s difficult to measure success in innovation, as different parts of the organization have different goals and approaches. Plus, he says “the word innovation is the stupidest word ever.”

“It just means everything and nothing,” Fabian says. “And so people try to say, ‘Well, what are your metrics for innovation?’ I’m like, ‘There aren’t any.’ [Innovation is] not one thing.”

And Fabian says that the term “ideas” can be just as hazy.

“I hate ideas as much I hate the word innovation, because they’re the worst,” he says. “The idea is nothing, and it’s all the rest of the stuff that you have to do after you have it to make anything.”

Fabian says that his group is careful to make sure that not all “ideas” and “innovation” are seen as emanating from UNICEF’s headquarters in New York. Rather, 88 percent of UNICEF’s resources are allocated to the country offices.

“A few years ago, we did a bunch of analysis, and all this stuff is based on data,” he says. “What we found is that anybody [in most organizations] can find \$10,000 to do something. And you can find time in your weekend or the afternoon. Anybody can get to that point... What they can’t do is find the \$30,000 to \$100,000 to get it to a point where it is actually generating data for the office [and so] it should go bigger.”

To address this issue, Fabian’s team made it possible for staff members in the country offices to apply to the venture fund through an internal channel. This way, his team can co-fund a project that needs help moving forward.

“We will co-fund with their country office the work that they’re doing, [but] it has to be based on UNICEF’s principles,” he says. “It de-risks for the office their ability to invest in their staff. It also puts the responsibility for failure on us. Anybody can say, ‘Well, yeah. Of course that didn’t work, because the innovation guys in New York are idiots.’”

And when projects do fail, Fabian says it’s an opportunity for communication and transparency. “We fail all the time,” Fabian says. “Ninety-five percent of our stuff just doesn’t work. If we were just letting that not be captured [and communicated via our website], then it would be a loss of time. At least this way, if we get hit by a bus tomorrow, there’s some record of the work that was done.” ●