Statement from Christopher Fabian
Senior Advisor on Innovation, UNICEF Office of Innovation

Defending the Rights of Vulnerable Children and Youth through Education: A Focus on the Role of Self-Teaching and Play

Tom Lantos Human Rights Commission

June 28, 2017

I would like to thank the co-chairs, Representative Randy Hultgren and Representative Jim McGovern, for holding this important and timely hearing, and for inviting UNICEF to testify.

As you know, for 70 years UNICEF has worked to save and improve the lives of children and families. We work in education, protection, health, nutrition, water and sanitation; we operate in both development and humanitarian contexts. In partnership with the United States, UNICEF has saved more children's lives than any organization in the world.

UNICEF has long approached its work through the lens of innovation – whether this was the child survival revolution of the 1980's to the work that the organization has done around creating fair and optimized supply chains for essential medicines and vaccines.

It is also an organization that has changed many times, and is, again, undergoing a profound set of changes – in many cases driven by the technology that we see causing shifts in the world around us.

As UNICEF shapes itself to a world where we see significant impacts on the wellbeing of children coming from threats like a broken environment, increased violence and movement of populations, and a labor force that is, globally, unprepared for the challenges of automation, we are looking both to our origins and our partners for inspiration.

Equity is in UNICEF's DNA. For us, this means ensuring rights and options for the world's most vulnerable children.

Equity, for UNICEF, means building services for the hardest-to-reach first – and using the logic of business, research, and development to ensure that the lessons learned from those difficult places can be scaled globally.

Our partners, increasingly in the corporate sphere, are also realizing that there is a need to do business differently. Gaps in information, opportunity, and choice are damaging not only to the world's most vulnerable, but to their core consumers and their employees.

Around the world, growing gaps between rich and poor are creating damaging, even dangerous, social, political and even economic emergencies. [Jack Ma]

Investments in the health, education, and protection of the most disadvantaged children help to reverse a vicious intergenerational cycle of poverty into a virtuous cycle. By giving today's disadvantaged children a fair chance in life, they can compete fairly as adults and help grow their economies and stabilize their societies.

UNICEF needs to look towards new areas, as well, where these gaps are growing more pronounced [pandemics, learning, nutrition, jobs, refugees].

In these emerging inequities, traditional solutions will not serve us. We know that tools that have been at hand for many years, our traditional survey instruments and technologies, will not give us the answers we need quickly enough.

And we know that the technologies that we have used – vaccines, a simple tape for measuring a child's upper arm, the Mark II hand pump – are incredibly powerful, but need to be deployed faster, better, and more efficiently.

How are we reaching the most disadvantaged? First, data. We can't reach them if we don't know who and where they are.

Around 290 million children – 1/3 of children globally -- are not registered at birth; they're hard to find. With no legal identity, they're denied access to formal schooling, the right to vote, healthcare and, for girls, proof that they're under the legal age to be married. They're also more vulnerable in emergencies.

New technologies and innovative use of existing technologies are helping us to register children quickly and inexpensively.

For example, Uganda had one of the lowest rates of birth registration in eastern and southern Africa. Five years ago, only 25% of Ugandan children had birth certificates. Over the last several years, UNICEF and the government of Uganda have used mobile phones, with simple, open-source technology, to create national birth registrations. Now more than 70% of Ugandan children get birth certificates, and that number is still increasing.

Similar systems are being rolled out in Tanzania, Mozambique, and elsewhere.

Just as we have to collect data like birth certification in real-time, so we need to work on so-called 'information poverty.' In other words: when individuals and communities don't have access to the correct information -- how to prevent Ebola spreading; when to vaccinate a child; what to feed a baby -- it can limit their opportunity, choice and wellbeing. So, the sooner we can assess a community's level of 'information poverty,' we can use that information for advocacy and action with partners.

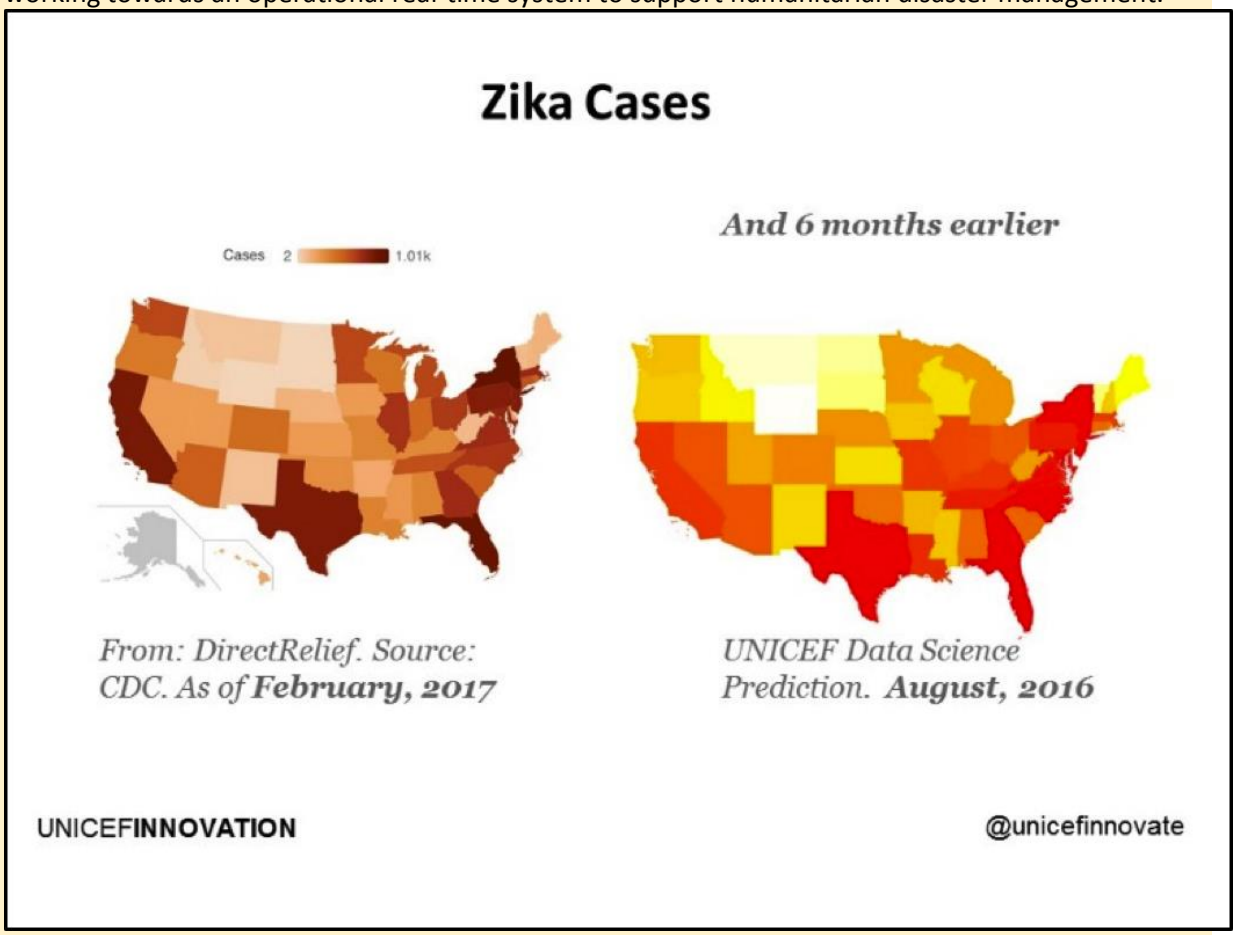
In order to assess information poverty, and fix it, we need to know where it is most severe. We are working with a new NGO, Project Connect, to map every school in the world, and understand their access to connectivity in real-time. For many schools, this access will be non-existent. Partners like OneWeb, Google, and mobile operators will work with us to use that mapping to better target their services – and ensure that the information that they provide is relevant to the communities who receive it.

Humans often work with less data than they should. Data is particularly valuable to UNICEF, both in emergency response and also in our ongoing development work. We've been able to work with private sector partners like Google, IBM, Amadeus and others to collect their data, aggregate it, and use it to understand how diseases are moving or where are the most vulnerable children might be.

During the Ebola epidemic, we used data from mobile network operators to understand where populations were moving. This type of realization can help us more correctly target where we would put a health center or where we would broadcast certain vital information

We were able to use real-time data as well in the Zika epidemic where we work with partners to understand mobility, and also to use data about poverty to understand which communities might be most vulnerable.

More detail on UNICEF's Data Science
Data partnership (acquisition) and analysis platform to allow UNICEF to use real-time information for better programming, policy, and emergency response. This platform (working name: "Magic Box") has been mentioned in the Telefonica white paper, Data for Good as "the most advanced initiative working towards an operational real-time system to support humanitarian disaster management."



Platform is up and preliminary test shows the capability to predict where mosquito borne diseases are travelling by combining various data sources (see attached map of exogenous Zika cases in the US and 6-month earlier predictive map generated by Magic Box platform).
Partnerships established with Telefonica, Amadeus, AT&T, IBM, Telenor, Bloomberg, Google, and Facebook - with making contributions of data, expertise, and funding and was presented at the Barcelona Mobile World Congress.

Such action can build better access to services - as is happening in Brazil's distance learning program in the Amazon; create better information flows for government -- as we did with EduTrack in Sierra Leone to track school supply delivery during and after Ebola; or build

more responsive services -- U-Report --that allow young people to have a voice and link that voice to action.

That means putting communities at the heart of solutions. Enabling them to participate. Creating loops where their voices can not only be heard, but turned to practical issues that are of interest to the entire community to solve.

U-Report is a simple, low-cost, system that enables real-time communication between young people throughout a country and decision-makers. It works over SMS on a basic mobile phone. It also has an app for smartphone users, and connects to Twitter and other social platforms. More than 3 million young people in 25 countries voicing their opinion on disease outbreaks and teacher shortages to insufficient supplies in community healthcare centers. Young people become not only recipients of services but architects of their futures.

With partners, we used U-Report to help stop a banana plague in Uganda. We texted: "Do you see yellow leaves on your banana trees?" With the responses, we built a map of the disease in real time so the Government could better target aid efforts.

In Nigeria, we used U-Report to identify whether or not youth know their HIV status. We put out this poll in December of last year and received over 120,000 responses telling us yes/no.

These answers informed our campaign, and will allow us to build more targeted responses, as we did with our HIV/AIDS counselling platform on U-Report, in Zambia, in 2012, where more than 70,000 young people got access to information about how to get voluntarily tested, resulting in a doubling of youth who accessed voluntary testing services.

A decade ago, many such solutions would have been impossible. Now we need to keep thinking of what will be possible.

We're asking questions such as: what role can Unmanned Aerial Vehicle (UAVs) play in delivering essential services – such as taking photos from above or mapping or surveying infrastructure damage after emergencies. And how will new technologies like 3D printing or ubiquitous connectivity change the way UNICEF works

Technologies like drones allow us to access new opportunities that would have previously been impossible. In the space of UAVs and drones UNICEF has created two corridors for testing new technology: one in Malawi and one in Vanuatu. These corridors are spaces for physical testing of this new technology and for learning about what skills pilots need and what types of services are most needed on the ground.

In Vanuatu, drones will be tested for the delivery of vaccines. In a country where distances between islands mean a delay in delivering vaccines and these delays can risk the temperature of medicine, drones can provide a quick and easy way to build a national supply chain.

When we bring in private sector partners to explore how these technologies can be used they do so under a framework that both protect civilian populations and also ensures that we learn from the results of their tests. Finally, companies that are testing their drones are responsible for training young engineers and entrepreneurs from these countries.

Last year, 2016, was one of the worst on record for children. Today, more than 55 million children are on the move because of war or violence. It's often on those 'terrible journeys' that UNICEF can have a significant impact – thanks to partners in the telecoms industry.

One of the most terrible journeys for children today is the refugee and migrant route out of Syria and Iraq into Europe. More than one in three of those on the move is a child.

Many of the refugees arriving in Europe have smartphones. Increasingly, they're using them to access information about where they are, where they can go, and what services are available.

"e-Learning Sudan" provides basic literacy and numeracy skills in Arabic. We collaborated with War Child Holland and it was built in Sudan. In 2016, it was awarded EURO 5 million by the Dutch Dream Fund for use in the migrant and refugee crisis.

"E-ta3m el Wahish" or "Feed the Monster" is a game that was recently developed in collaboration with the Government of Norway. This game teaches Arabic literacy and basic word skills to refugee children, and will be adapted into other languages in the coming months.

Kolbri, an online learning and open education platform, first build in our Innovation Lab in South Sudan by partners from Khan Academy Lite, recently was awarded approximately 5 million USD by Google.org and is currently being adapted to be used in learning centers in Greece, East Africa, and the Middle East.

All these services -- tech hubs, counting and monitoring, e-learning – can be applied to almost any emergency. Earthquake or Ebola, conflict or tsunami, partnerships with the telecoms sector can help us reach children faster, equip them information, reunite them with loved ones, and respond with vital services.

It's important to consider how we invest in these products. UNICEF's innovation venture fund is the first vehicle of its kind in the United Nations. The venture fund allows us to make $50-$100,000 investment in early stage tech startups.

The Venture Fund is an $11 million fund, making $50,000-100,000 investments in early stage, open-source technology with the first year setup including systems building (research, experimentation, de-risking for year two, network building; and the second year (2017) investing in a larger set of companies. To date, there have been innovation investments in 27 country offices and 5 investments in start-ups.

UNICEF built the team that is needed to properly make and support investments, including the initial 5 companies that we invested in. The Venture Fund site (alpha version) is up and running at https://unicefinnovationfund.org/. The Fund will be making 2nd round of ~10-15 investments, and UNICEF is conducting targeted discussions in programme countries with the start-up / VC community to identify and source start-ups in markets like Egypt, Indonesia, and China.

With continued U.S. Government support, and in partnership with U.S. companies and nonprofits, we can truly reach every child. Thank you again for the opportunity to share UNICEF's Innovation work with you today.