Innovation at UNICEF
- from start-up to scale-up -

Created for the launch of the
UNICEF Global Innovation Centre and the
UNICEF Innovation Fund

May 2015

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Yellow highlight indicates the projects scaling-up

GLOBAL INNOVATION CENTRE

UNICEF's Global Innovation Centre (GIC) supports and incubates innovations developed by partners and enables externally generated innovations to be included in UNICEF's innovation portfolio. The Centre provides leadership and technical support to the roll-out and scale-up of a select portfolio of proven, innovative solutions by expanding their application from one to several countries and regions, supporting South-South collaboration. Founding members of the GIC Steering Committee include the Ministry of Foreign Affairs of the Republic of Korea, the Philips Foundation, and the UNICEF National Committees of Canada, the United Kingdom and the United States.

INNOVATION FUND

UNICEF's Innovation Fund (IF) provides resources to quickly assess, fund, and scale innovations that work at a small scale to generate sufficient evidence that can provide the basis for scale-up across countries or regions. Founding members of the Innovation Fund include The Walt Disney Company and the Government of Denmark.

PRINCIPLES FOR INNOVATION & TECHNOLOGY IN DEVELOPMENT

These principles are not intended as hard and fast rules but meant as best-practice guidelines to inform the design of technology enabled development programmes.

These Innovation Principles have been endorsed or adopted by the following partners: Bill & Melinda Gates Foundation, Global Pulse, IKEA Foundation, OCHA, SIDA, UN Foundation, UNDP, UNHCR, UNICEF, USAID, WFP and WHO.

1. Design with the User

- Develop context appropriate solutions informed by user needs.
- Include all user groups in planning, development, implementation and assessment.
- Develop projects in an incremental and iterative manner.
- Design solutions that learn from and enhance existing workflows and plan for organizational adaptation.
- Ensure solutions are sensitive to, and useful for, the most marginalized populations: women, children, those with disabilities, and those affected by conflict and disaster.

2. Understand the Existing Ecosystem

- Participate in networks and communities of like-minded practitioners.
- Align to existing technological, legal, and regulatory policies.

3. Design for Scale

- Use, modify and extend existing tools, platforms, and frameworks when possible.
- Develop in modular ways, favoring approaches that are inter-operable over those that are monolithic by design.

4. Build for Sustainability

- Plan for sustainability from the start, including planning for long-term financial health, i.e. assessing total cost of ownership.
- Utilize and invest in local communities and developers by default and help catalyze their growth.
- Engage with local governments to ensure integration into national strategy and identify high-level government advocates.

5. Be Data Driven

- Design projects so that impact can be measured at discrete milestones with a focus on outcomes rather than outputs.
- Evaluate innovative solutions and areas where there are gaps in data and evidence.
- Use real-time information to monitor and inform management decisions at all levels.
- When possible, leverage data as a by-product of user actions and transactions for assessments.

6. Use Open Standards, Open Data, Open Source, and Open Innovation

- Adopt and expand existing open standards.
- Use open data and functionalities and expose them in documented APIs (Application Programming Interfaces) where use by a larger community is possible.
- Invest in software as a public good.
- Develop software to be open source by default with the code made available in public repositories and supported through developer communities.

7. Reuse and Improve

- Design for scale from the start, and assess and mitigate dependencies that might limit ability to scale.
- Employ a "systems" approach to design, considering implications of design beyond an immediate project.
- Be replicable and customizable in other countries and contexts.
- Demonstrate impact before scaling a solution.
- Analise all technology choices through the lens of national and regional scale.
- Factor in partnerships from the beginning and start early negotiations.

8. Do no harm

- Assess and mitigate risks to the security of users and their data.
- Consider the context and needs for privacy of personally identifiable information when designing solutions and mitigate accordingly.
- Ensure equity and fairness in co-creation, and protect the best interests of the end-users.

9. Be Collaborative

- Engage diverse expertise across disciplines and industries at all stages.
- Work across sector silos to create coordinated and more holistic approaches.
- Document work, results, processes and best practices and share them widely.
- Publish materials under a Creative Commons license by default, with strong rationale if another licensing approach is taken.
- When possible, leverage data as a by-product of user actions and transactions for assessments.

RAPIDPRO

RapidPro is an open source software that allows you to easily build and scale mobile-based applications from anywhere in the world. RapidPro powers the way governments and development partners connect, engage, and collaborate directly with the most important - and often most marginalized - voices in their communities.

From youth engagement programmes like U-Report to education monitoring systems like EduTrac, RapidPro is becoming UNICEF's common platform for developing applications that can be adapted for different contexts and sectors. That's why RapidPro has been coined an "app store" for international development.

UNICEF Innovation continues to work with a variety of technology and development partners around the world to ensure that RapidPro and apps powered by RapidPro evolve with and respond to the needs of key stakeholders in the development community.
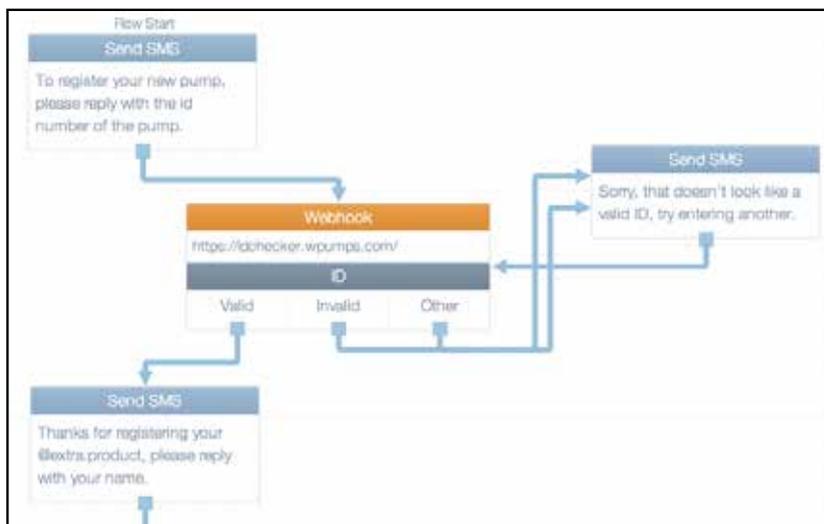
Example of
RapidPro text flow

RapidPro is a global open source platform that has enabled the creation and scale-up of applications for youth engagement (U-Report), education (EduTrac), and health (mTrac).

Almost 30 million messages have been sent or received through RapidPro since its launch in September 2014.

Currently RapidPro is being used in five UNICEF programmes:

Education, Health, Communications, Polio, and Nutrition

Supported by:

The creation of RapidPro was primarily supported by the following UNICEF country offices: Afghanistan, Guinea, Nigeria, Tanzania, Somalia, and Zimbabwe

U-REPORT

U-Report is a mobile phone, text based service designed to give young people a chance to voice their opinions on issues that they care about in their communities, encourage citizen-led development, and create positive change. U-Reporters join the programme but sending the SMS "join" to a short-code or following a U-Report twitter handle in response to advertising and partner field trainings advertising the programme. U-Reporters are then asked a series registration questions about their basic demographics, which enables responses to be analysed and messages targeted. These include age, gender, district, village and how they heard about U-Report.

Having launched in May 2011 in Uganda there are now over 700,000 U-Reporters throughout 14 countries including Uganda, Nigeria, Zambia, Burundi, and Indonesia. The average age is 24 and 40% are female. There have been over 6 million messages sent by U-Reporters to UNICEF, with the data being mapped in real time. Approximately 30,000 young people sign up to U-Report somewhere in the world every week By the end of 2015, U-Report could be live in 20 countries reaching 1 million U-Reporters.
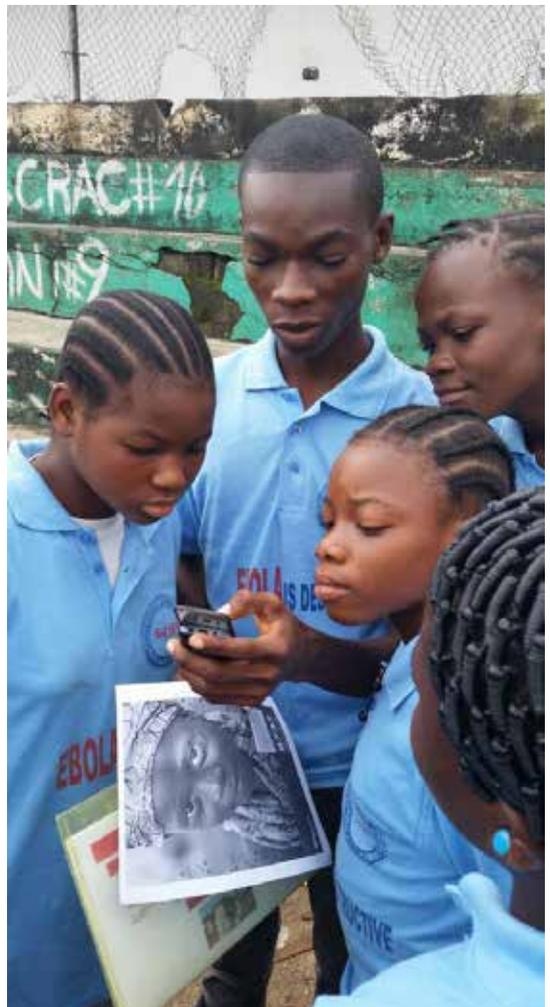
Live in 14 countries, helping 700,000 young people voice issues that matter to them.

Report
ZIMBABWE
VOICE MATTERS

Report
SIERRA LEONE
VOICE MATTERS

Report
RÉPUBLIQUE CENTRAFRICAINE
VOTRE VOIX COMPTE

Report
MALI
EXPRIME-TOI

Report
NIGERIA
VOICE MATTERS

Report
LIBERIA
VOICE MATTERS

Report
ZAMBIA
VOICE MATTERS

Report
SWAZILAND
VOICE MATTERS

Report
DRC
VOICE MATTERS

Report
BURUNDI
VOICE MATTERS

Report
INDONESIA
VOICE MATTERS

Report
MÉXICO
TU VOZ CUENTA

Report
UGANDA
VOICE MATTERS

Report
CAMEROUN
VOTRE VOIX COMPTE

Countries in now:

Burundi, Cameroon, CAR, DRC, Indonesia, Liberia, Mali, Mexico, Nigeria, Swaziland, Sierra Leone, Uganda, Zambia, Zimbabwe

Scale-up plans for 2015/2016:

Chad, Chile, EU, Ghana, Jordan, Pakistan, Senegal, South Africa, UK, Ukraine as well as a Global version of U-Report.

Supported by:

Global Pulse, Government of Mexico, Idibon, Internet.org, Nyaruka, Twitter, Uganda Parliamentary Forum for Children, United Nations Millennial Campaign, Verynice, World Organization of the Scout Movement, and many national youth groups.

Special thanks to the UNICEF country offices of Nigeria, Swaziland, Uganda, Zambia, and Zimbabwe.

SCALING-UP

BY YOUTH FOR YOUTH

The By Youth For Youth (BYFY) programme prepares young people from vulnerable communities to identify, analyse, and take entrepreneurial action against community challenges they care about—helping participants realise their role as agents of social change, and building their professional readiness and resilience along the way.

The cornerstone of the BYFY programme is UPSHIFT: Social Impact Workshop, a three day learning experience that introduces boys and girls to some of the tools and techniques—like human-centred design, agile development, creative ideation, and prototyping and user-testing—in a social innovator's toolkit. Participants work side-by-side with a mentor to move from challenge to solution, while engaging in networking and reflection activities in their down time. At the close of the workshop, teams exhibit and pitch their solutions to a judging panel who selects projects for implementation and ongoing support from the Lab.

Support offered by the BYFY programme includes: up to EUR 2,000 in seed funding, access to co-working space and a library of equipment, 3 months of mentorship from a dedicated staff mentor, training, and access to design, marketing and communications, and product support and services from the Lab.

To date, there have been 117 successful projects; 83 per cent continued past their 3-month period of support and 21 generated revenue.

Piloted in Kosovo, to date the programme has empowered 412 youth leaders helping 29,666 beneficiaries.

Countries in now:

Kosovo

Scale-up plans for 2015/2016:

Up to six UNICEF country offices

Supported by:

The EU, Austrian Development Agency (ADA), ING, and Peer Educators Network (PEN)

SCALING-UP

ADOLESCENT TOOLKIT FOR EXPRESSION AND INNOVATION

The Adolescent Kit for Expression and Innovation is a package of guidance, tools and supplies to support country programmes to reach and engage adolescents ages 10-18 affected by conflict and other crises through education, child protection, youth development and/or peace building initiatives. UNICEF's Adolescent Development and Participation Unit (ADAP) is designing the kit with colleagues, partners and adolescents around the world - especially through extended collaborations with UNICEF Indonesia and UNICEF South Sudan.

The purpose of the adolescent kit for expression and innovation is to promote positive outcomes for adolescents' psychosocial wellbeing, learning life skills, and positive active engagement in their communities through adaptable, developmentally appropriate approaches. The kit especially supports activities using arts, innovation and adolescent-led projects as methods to achieve those outcomes.

The kit is flexible and adaptable to different types of programming contexts, including recent-onset emergencies and protracted crises, as well as other low resource environments. It is also designed to be adapted to the developmental capacities, interests and priorities of the adolescents with whom it is used. It can be used to support new programmes or introduced into ongoing initiatives. The entire kit was developed as a resource that can be used in peace building initiatives, and the guidance is aligned to the Peacebuilding Competency Framework that ADAP developed and disseminated in late 2014.

The Adolescent Kit is the first UNICEF kit to use 'design thinking' and 'human centered design' (HCD) methods in its creation. Extensive efforts have been made to discover and understand the needs, desires and behaviours of adolescents and facilitators in low-resource and humanitarian-action settings. These learnings - combined with research into materials and design innovations - guided the generation of a number of concepts around the kit's functionality, look and user-experience. Prototypes were evaluated for characteristics such as portability, durability and multi-functionality.

Promising designs are being tested and evaluated in the field. In June 2015, ADAP will

begin production on 1000 kits (each reaches 50 adolescents). ADAP will work with UNICEF country programmes to put the kits to use through new or ongoing programmes. Results from the field will be incorporated in subsequent designs of the kit. Kits will be made available globally to UNICEF country offices online and through UNICEF's supply catalogue in 2016.

Supported by:

UNICEF–Indonesia Education and Adolescent Development Programme Innovation programme and national partners; UNICEF–South Sudan's Education and Youth Lead programmes; U.S. Fund for UNICEF; The Peacebuilding Education and Advocacy (PBEA) Programme; the Government of the Netherlands

EDUTRAC

EduTrac leverages RapidPro to support and strengthen education systems. EduTrac can be used to send and receive information, track indicators, facilitate sharing and community building, support M&E processes, and backstop supply chain tracking. In UNICEF, EduTrac is currently being used:

- In **Uganda** to strengthen District Education Officers' efforts to support schools in their districts. Teachers, head teachers, school committee members and report periodically on indicators, such as absenteeism, cases of violence against children, and curriculum progress. Data is used to drive supervision efforts at the local level, and to inform planning nationally.

- In **Afghanistan** to connect more than 70 teachers in UNICEF's accelerated learning centres spread throughout Kandahar. The learning centres teach formerly out-of-school adolescents reading and math using a condensed curriculum. EduTrac allows the teachers to report the needs of their centre to UNICEF; share knowledge; coordinate with other teachers, and; offer support and guidance to each other.

- In **Zimbabwe** to empower District Education Officers to have a real time information on key education indicators and make timely decisions and take corrective action with the information. School Heads report on a weekly, monthly, or termly basis on indicators such as pupil and teacher absenteeism, school infrastructure, and supervision visits in an effort to strengthen the education system across the country.

EduTrac is a data collection system that uses basic mobile phones to help frontline workers send and receive information that can help them do their jobs better.

EDU TRAC

TRACKING AND MONITORING EDUCATION

Countries in now:

Afghanistan, Central African Republic, Uganda, Zimbabwe

Scale-up plans for 2015/2016:

India, Pakistan, Peru, Senegal

Supported by:

Ministries of Education in countries of focus as well as Education sector partners.

SCALING-UP

mTRAC

Available on RapidPro, mTrac is an innovation using mobile phones and SMS to digitize the transfer of Health Management Information System (HMIS). Launched by the Ministry of Health, Uganda, the initial focus of mTrac was to speed up the transfer of HMIS weekly reports, which cover disease outbreaks and medicines, provide a mechanism for community members to report on service delivery challenges, and to empower district Health Teams by providing timely information for action.

The aim is to avoid unnecessary stock-outs and to ensure transparency and accountability. Real-time monitoring of vaccine supplies enabled stock-outs to be addressed and led to an increase in immunization coverage of DPT1 from 52% to 98% within one year. The initiative also integrates governance and accountability through citizen feedback, an anonymous hotline and public dialogue sessions, which has allowed District Health Management Teams to address issues raised by community members, such as those related to quality of care and health worker absenteeism.

During an Ebola outbreak in 2012, mTrac was also used in Uganda through a series of SMS messages alerting health workers to the outbreak, the case definition (symptoms), isolation procedures, the location of the nearest isolation facilities and the hotline to the national response team for reporting suspected cases.

To date, over 16,000 Health Facility workers in 3,200 Health Facilities have been registered and trained, and are actively using mTrac for reporting critical health data.

Countries in now:

Uganda

Scale-up plans for 2015/2016:

Up to six UNICEF country offices

Supported by:

Ministry of Health, Uganda

mHealth: SCALING-UP

mHERO

Developed on RapidPro

For more information, visit:
http://mhero.org/

Powered by RapidPro, mHero harnesses mobile technology and uses it to improve existing health information systems (HIS), making it possible to rapidly strengthen communication among health authorities, the health workforce, and local communities, in order to save lives.

In August 2014, the mHero Partnership, led by UNICEF, IntraHealth International, and the US Agency for International Development (USAID), and a team of international stakeholders, created mHero. The mHero platform allows health workers, government authorities, and other key stakeholders to engage in real-time, targeted communication via two-way short message service (SMS), interactive voice response, and direct calls. mHero communications, which are flexible and scalable, and can be triggered both centrally and locally, go far beyond the traditional "message blasts" offered by many technology vendors, enabling stakeholders to rapidly respond to health workers' needs.

During the pilot in Liberia, mHero sent SMSs to 482 health workers in four counties to validate health workers' phone numbers, location, job title, supervisor, facility, bank account information (critical for timely payments), and use of facility attendance logs. Promisingly, of the 289 health workers reached, 57 per cent responded to the first mHero message. About three-fourths of those who responded to the first message completed all 15 questions in the work flow.

Supported by:

IntraHealth International, Jembi Health Systems, OpenHIE, ThoughtWorks, USAID

POLIOTRAC

Developed on RapidPro

For more information, visit:
http://bit.ly/unicef_innovation_PolioTrac

UNICEF is using mobile technology and real time data to engage frontline staff in Pakistan, Afghanistan, and Nigeria and help them with their polio vaccination efforts. Through satisfaction surveys, flash polls, knowledge and message reinforcement, and motivational messages, UNICEF is helping frontline staff to be more effective in their efforts to eradicate polio.

Supported by:

UNICEF Pakistan and UNICEF Afghanistan Country Offices

Percent Zero Dose Children Vaccinated at Transit Points
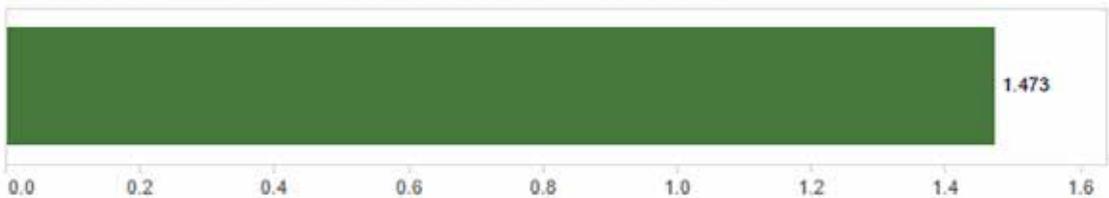
All Provinces COMNet Survey %

mHealth: SCALING-UP
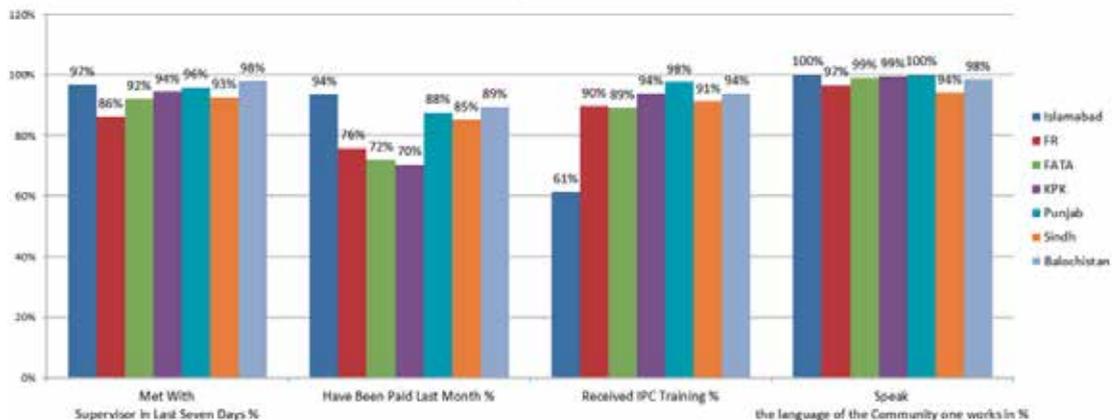
1,000 DAYS

Developed on RapidPro

For more information, visit:
http://bit.ly/unicef_innovation_1000_Days
http://bit.ly/unicef_innovation_MomConnect

UNICEF believes that a holistic approach will increase efficiencies and improve health outcomes for mothers and children. This is why UNICEF Innovation has partnered with health and nutrition programmes globally to strengthen front-line health services by providing mobile services for support across the entire continuum-of-care. This support includes mobile services for growth monitoring, antenatal & postnatal visit reminders, HIV/AIDS lab results delivery, and supply & logistics support for essential medicines.

Using its learnings from national projects like Project Mwana, AnthroWatch, mTrac, Antenatal Care and others, UNICEF Innovation will be building the 1,000 Days suite of tools on RapidPro.

By modularizing each of these systems into key feature sets for the 1,000 days continuum of maternal and child health care, the 1,000 Days app will achieve the following modules:

- **Mother Reminders** -- Reminders for mothers & health workers throughout pregnancy and after birth for scheduled appointments and other events;
- **Lab Results Delivery** -- lab results delivery for HIV/AIDS and other testing;
- **Nutrition** -- Growth monitoring & nutritional surveillance;
- **mTrac** -- Supply & logistics tracking for health facilities and warehouses

Currently, more than 10 countries including Laos, Mexico, Nicaragua, Rwanda, South Africa, Uganda, and Zambia, are using or interested in a module of the 1000 Days suite of tools.

mHealth: SCALING-UP

EQUITRACK

To learn more about EquiTrack, visit:
http://uniceflebanoninnovation.github.io/EquiTrack/

EquiTrack is a new partner tracking tool that has been developed by the UNICEF Innovation Lab in Lebanon with support from Innovations Lab Kosovo It serves as an online repository of partnership cooperation agreement documentation that can be easily accessed from anywhere. Partnerships are attributed and tracked against a multitude of result structures, donors, grants, geographical locations and gateways. EquiTrack was recently expanded to include a trip request and reporting feature, called EquiTrip. EquiTrip allows users to fill in travel request, supervisors to approve requests, the travel assistant to be informed of travel for logistic preparation and reservations, and travelers to report and follow up on action points for each travel in Lebanon and abroad.

Countries in now:

Iraq, Jordan, Lebanon, South Sudan, Sudan, and Syria

Scale-up plans for 2015/2016:

Led by the UNICEF Field Results Group, EquiTrack could be rolled-out to as many as 30 countries.

Supported by:

UNICEF Lebanon Country Office and Kosovo Innovation Lab for their proof of concept efforts.

Over 5,000 field trips have been planned and executed using the partnership management platform and over 400 partnerships have been planned and managed.

INTERNET OF GOOD THINGS

Internet of Good Things is a set of mobile-ready web based resources and applications that will bring good to your life. The IoGT initiative is delivering value added information and lifesaving recommendations to the population most in need directly on their phones at no cost to the end user. The information delivered includes — but is not limited to: educational content, health and hygiene information, children' rights, and information on Ebola. Other types of content such as a guide to online safety and digital citizenship, youth empowerment, HIV and sexual health advice, family planning, legal advice, and positive parenting are all in preparation to be distributed during 2015.

IoGT also serves as an amplifier for established UNICEF services such as U-Report. IoGT, powered by UNICEF, is designed to be a go-to destination for free life-enhancing information and plans to include content from other partners such as Malaria no more, Mama, baby Centre, the Nike foundation and all other interested content producers eager to reach their target audience directly on mobile.
Countries in now: IoGT via Internet.org is distributed in nine countries: Colombia, Ghana, Guatemala, India, Indonesia, Kenya, Philippines, Tanzania, and Zambia. Our web-based resources are accessible by an addressable market of 800 million people globally.

UNICEF content has so far reached 250,000 users. 50+ sites have been prepared in 14 languages and 14 country offices were trained to edit and upload content on their CMS.

Scale-up plans:

The roadmap for IoGT rollout includes 100 countries by the end of 2015.

Supported by:

- **Content partners:** UNICEF country offices, UNICEF programmes, other UN bodies, Government bodies, and other Non-profit organizations;
- **Enablers:** Mobile Network Operators (MNOs) who provide the zero rated access necessary for end users to consume web-based resources at no cost.
- **Distribution partners:** Distribution partners provide the "last mile" access to end-users. They are numerous and diverse. So far only Facebook is distributing IoGT content, via the Internet.org initiative. In the short to mid-term, we are considering partnering with a myriad of other distribution partners including: social networks, mobile web browsers, handset manufacturers, and search engines.

SCALING-UP

DIGITAL KIOSK

For more information, visit:
http://bit.ly/unicef_innovation_digital_drum

An increasing number of jobs and educational opportunities in today's connected world require a basic understanding of how to use a computer, basic word processing, and the internet; and youth who do not have these skills will have a difficult time bridging this "digital divide". UNICEF's Digital Kiosks aim to bridge this gap by providing a rugged and easily maintainable technology package, especially for youth centres located in rural areas that can make use of solar energy. Each Kiosk has 3 computers with youth-friendly content available whether internet connectivity exists or not. These computers are connected to solar panels, which can also produce enough electricity to power a photocopier, scanner, or other equipment that the youth centre can use to generate sustainable revenue. The Digital Kiosk is being piloted in Uganda, and has reached about 5,000 users. UNICEF is working with various private-sector and non-profit partners to further develop the Digital Kiosk as a low-cost, open-source hardware product.

Supported by:
Design Without Borders and Aleutia

MOBISTATION

The MobiStation is a multimedia tool to support education in and out of schools and to assist teachers, improving access, equity, and quality in education. Built into a portable suitcase, it is equipped with a solar-powered laptop, a low-power pico-projector and an audio system. School books, teaching videos and any other digital materials can be projected in the classroom or temporary learning space. Through the provision of specific offline content to support and compliment the school curriculum such as e-books, classroom videos with the best teachers, and other multimedia content, it creates an innovative learning environment and can be carried to various locations, without the need for Internet access. In addition it can also improve health education at a health facility - assisting health workers to access quality health care advice from other professionals in medicine. The MobiStation is currently in Uganda the initial pilot phase and tested in various environments, including pilot schools and health centers.

Pi4L
RASPBERRY PI FOR LEARNING

For more information, visit:
http://bit.ly/unicef_innovation_Pi4L

The Pi4L Pilot is an e-learning programme that aims to provide access to education for Syrian refugees and underserved communities at large. The overarching goal of Pi4L is to increase the access of learning opportunities and build the capacity of educators so that they can provide quality learning to a larger number of children by increasing their level of autonomy and computer literacy skills. The programme combines several innovations:

- An all in one Raspberry Pi based computer designed by UNICEF Lebanon;
- An offline version of Khan Academy called KA Lite designed by Foundation for Learning Equality;
- Scratch courses -- a visual programming language designed by MIT;
- Courses and training designed by International Education Association (IEA) based in Lebanon.

The content of the Pi4L courses combined basic numeracy skills, visual programming, and real-life themes based on UNICEF's social and health facts for life. The courses are delivered around three interdependent learning tracks dedicated to student learning outcomes as well as a fourth track for teacher professional development.

In its pilot phase, more than 300 children have used Pi4L. Of the 300, 55 per cent were girls. The attendance rate for Pi4L classes over the four-week course was 88 per cent. Many of these students (up to 40 per cent in one location) were working children.

Supported by:
Foundation For Learning Equality, International Education Association, and implementing partners: Ana Aqra, AVSI, Beyond, and Mouvement Social

eLEARNING SUDAN

For more information, visit:
http://www.educationinnovations.org/program/elearning-sudan

The eLearning Sudan Project (eLS) creates accelerated learning opportunities for out of school children through the use of games played on a tablet. Children can access these resources, with the help of facilitators, in community spaces. This innovation combines a concrete intervention with a systemic approach, engaging key stakeholders. Some of the characteristics that make it unique are:

- eLS generates rigorous data on what children are actually learning, comparing these results to the ones attained by students who have access to traditional methods. Actual effectiveness in this area is key for future scale-up;
- The government recognizes eLS open source games as an alternative pathway to learn the first three years of the national math curriculum;
- Communities are active participants, providing learning spaces, selecting members to act as facilitators, and acquiring basic hardware/software troubleshooting skills;
- It is the result of a multi-stakeholder partnership involving Ahfad University for Women, local organizations, War Child Holland, the Ministry of Education, and UNICEF. If proven effective in its current test

with 1,200 children, eLS could potentially offer learning opportunities for over 1.8 million Sudanese primary school age children from marginalized communities with no access to formal education systems. And, through adaptation, this model could offer hope for 58 million out of school primary age children worldwide.

Supported by:

Ahfad University of Women, the Sudanese Ministry of Education and War Child Holland, in close cooperation with TNO (Netherlands Organisation for Scientific Research), UNICEF International, and the Dutch Ministry of Foreign Affairs.

U-PORTAL

For more information, visit:
**http://bit.ly/unicef_innovation_U-Portal**

Better educational opportunities are essential to young people. They need access to quality educational resources that effectively supplement the school curriculum, even as they benefit from tools and materials designed to increase their financial, technical and digital literacy. UNICEF is developing an open-source digital platform to support the learning of children in and out of school. Designed with the users and based on extensive feedback from young people, the U-Portal is an open-source platform aimed at supporting schools and community centres in providing quality educational resources and opportunities. Filled with curated videos, lessons and audio clips from educational resources like Khan Academy, CK-12 and local partners, U-Portal also contains content aimed at developing life skills, digital literacy and technical competence. The system is user-friendly and able to be used in both online and offline settings.

U-Portal also leverages system analytics to help UNICEF and partners identify the most useful and relevant content for young people. Combined with SMS-based monitoring and frequent visits and training, the platform and content will continually evolve, ensuring that it remains relevant to young people. Future platform iterations will include multilingual support, games and support for blended learning programmes. U-Portal is currently deployed in Burundi, South Sudan and rural Uganda via UNICEF's Digital Kiosks, reaching approximately 3,000 users. Several recent partnerships have the potential to significantly expand its reach in the months ahead, including secondary schools, community libraries, and ICT centres, to ensure that out-of-school and marginalized young people are able to engage with the platform as well.

Supported by:
Design Without Borders
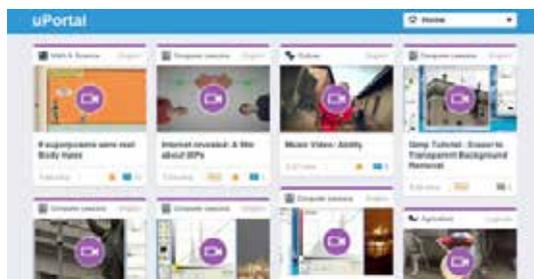
YUUDEE APP FOR INCLUSIVE LEARNING

For more information, visit:
https://itunes.apple.com/cn/app/xiao-yu-di/id794832934?mt=8

Yuudee is tablet-based application developed for children with minimal verbal skills, and children whose receptive language skills are better than their expressive language skills. Yuudee has two functions: it is an Augmentative and Alternative Communication (AAC) tool for children; it can also be used as a teaching tool for parents and teachers to teach children cognitive skills.

A built-in repository of icons and 40 libraries is available for users as a start. Parents and teachers can easily add to these resources and customize lessons catering to the specific needs of each child, with flexible and user-friendly customization supported by Yuudee. The iOS version of Yuudee in Chinese, was announced in April 2014 available on the Apple Store. A free, open source, android and international version of the application is being launched and tested with the launch of the Global Innovation Centre.

Supported by:
Peking University School of Life Sciences; National Institute of Biological Sciences; Tsinghua University Academy of Arts and Design; Stars and Rain Autism Training Center; G-Wearables; Inway Design; AppChina

PRIMERO

The Information Management and Innovation to Protect Children in Emergencies project has developed a software application that will help partners securely collect, store, manage, and share data for protection-related incident monitoring and case management. The new system is called Primero (Protection-related Information Management). It is a "next generation" of the field-tested inter-agency CPIMS and GBVIMS systems, currently in use in 20+ countries. These systems, along with the MRMIMS, operate as separate modules on the Primero platform. The inter-agency Steering Committees that govern their use will continue to support these new modules.

Primero is flexible and adaptable to accommodate a broad range of protection concerns including GBV, family tracing and reunification, and grave violations of children's rights in situations of armed conflict. To meet operational challenges, the application was designed to function both on- and off-line, with limited or no connectivity, and in multiple deployment configurations. A strong emphasis has been placed on security and confidentiality. Tiered access and granular, role-based security ensures that only those who need to see data will have access to it. All system transactions are time stamped, password protected and encrypted.

Secure and safe data sharing is central to Primero, the platform went through and extensive third party security review, encompassing ethical hacks, penetration tests, brute force attacks and source code reviews, in addition to internal UNICEF Quality Assurance tests regularly undertaken.

Countries piloted include:

Jordan (Zaatari), Kenya (Dadaab) and Somalia/Mogadishu. Primero underwent a comprehensive third party security assessment and planning for phased roll-outs in 5-7 countries in 2015 has begun.

Supported by:

UNICEF, IRC, Save the Children, UNFPA, DPKO and OSRSG-CAAC

RAPIDFTR

For more information, visit:
http://www.rapidftr.com/

RapidFTR is a versatile open-source mobile phone application and data storage system that streamlines and expedites documentation, tracing and reunification of unaccompanied and separated children (UASC) in emergency situations by collecting, sorting and sharing information on UASC on mobile technology. RapidFTR is specifically designed for tracing and reunification in the immediate aftermath of a crisis and during on-going recovery, and has been field-tested in the Philippines, South Sudan, and Uganda. Future plans are for RapidFTR to be integrated into Primero.

Supported by:

New York University Interactive Telecommunications Program, the Humanitarian Innovation Fund, UNICEF Child Protection, and UNICEF Supply Division
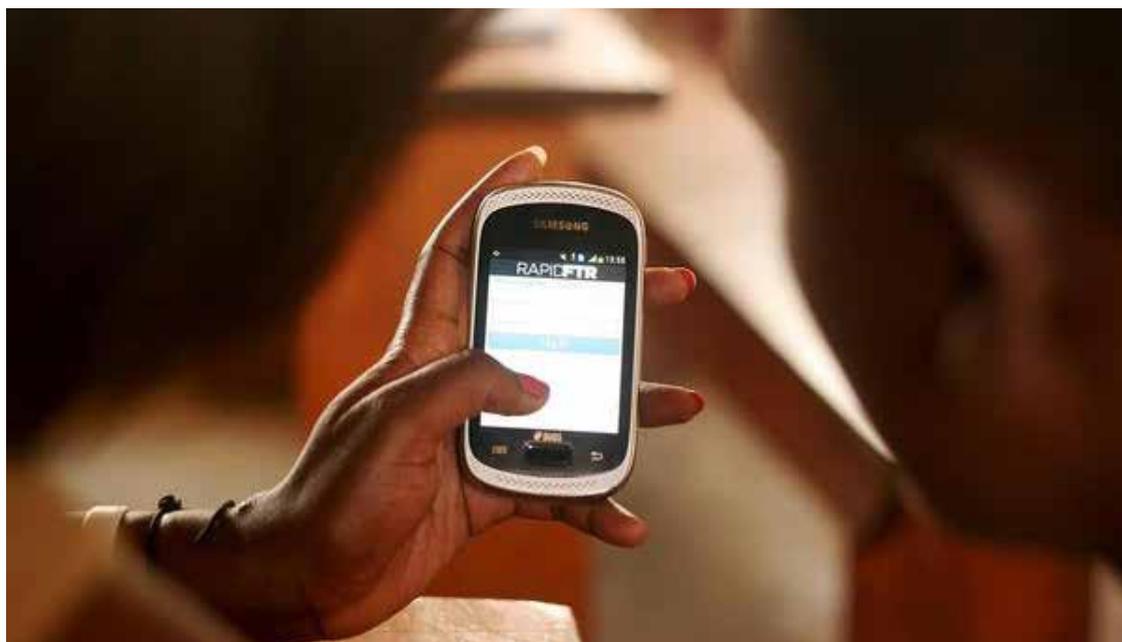
ARIDA

ACUTE RESPIRATORY INFECTION DIAGNOSTICS AID

For more information, visit:
http://bit.ly/unicef_innovation_ARIDA

Pneumonia killed an estimated 935 000 children under the age of five in 2013. As part of the fight against pneumonia, UNICEF has compiled a Target Product Profile to convey information regarding the intended use, context of use, user needs, constraints and stakeholder needs for an ARIDA to suppliers, and thereby to assist the development and the availability of products targeted for use by community health workers in resource-limited environments. The document is thought to inspire and enable developers, manufactures and suppliers to develop and market products that can be procured by UNICEF and others and supplied to health workers around the world.

Supported by:

Malaria Consortium; Bill and Melinda Gates Foundation (BMGF); Pneumonia Working Group

PRIMARY SCHOOL FURNITURE DESIGN & PROCUREMENT GUIDELINES

For more information, visit:
http://bit.ly/unicef_innovation_primary_school_furniture

The purpose of the Primary School Furniture Design & Procurement Guidelines project is twofold.

- First, to develop new, innovative furniture designs, which are built locally with locally available materials, are easy to assemble, require low maintenance, and are strong, durable and child-friendly.
- Secondly, to develop a local procurement guideline that covers all aspects of furniture planning such as design, production, delivery and maintenance.

This is currently being piloted in Malawi, with plans to roll-out Globally.

Supported by:

Malawi Country Office; Malawi Ministry of Education; Murphy Burnham & Buttrick Architects

VIVA
(VISIBILITY FOR VACCINES)

ViVa is a web-based vaccine stock data monitoring and advocacy tool which enables the EPI structure in countries to identify any upcoming constraint related to vaccine stock levels (stock-outs or overstocking) through intuitive and user-friendly visualizations. Thanks to an early identification of upcoming constraint, the EPI structure can then anticipate and take corrective actions in time, as well as advocate for support from the relevant stakeholders. An Excel based prototype was piloted in DRC, Niger, Senegal, Botswana and the Philippines in 2014. The response was very positive, and resulted in good feedback on design improvements. The project was then presented at regional EPI meetings in the WCA, ESA and MENA regions and received a strong interest from the participating countries. A scaling up phase has started, with new countries now using the tool and others on-boarding In parallel, the development of the web-based application is underway and the new platform will be introduced by mid- 2015. It includes many more features (including secured access, addition of regional levels, and email alerts) and will replace the current Excel based tool.

Countries tested in:

Botswana, DRC, Niger, the Philippines, and Senegal

Scale-up plans include:

Benin, Burkina Faso, Chad, Comoros, Gambia, Guinea, Kenya, Liberia, Madagascar, Mozambique, Sierra Leone, South Sudan, Tanzania, Togo, and Uganda. Supported by: WHO; UNICEF Regional offices of WCARO & ESARO; UPS

A tool for the EPI structure to monitor vaccines stock level projections and receive early warnings.
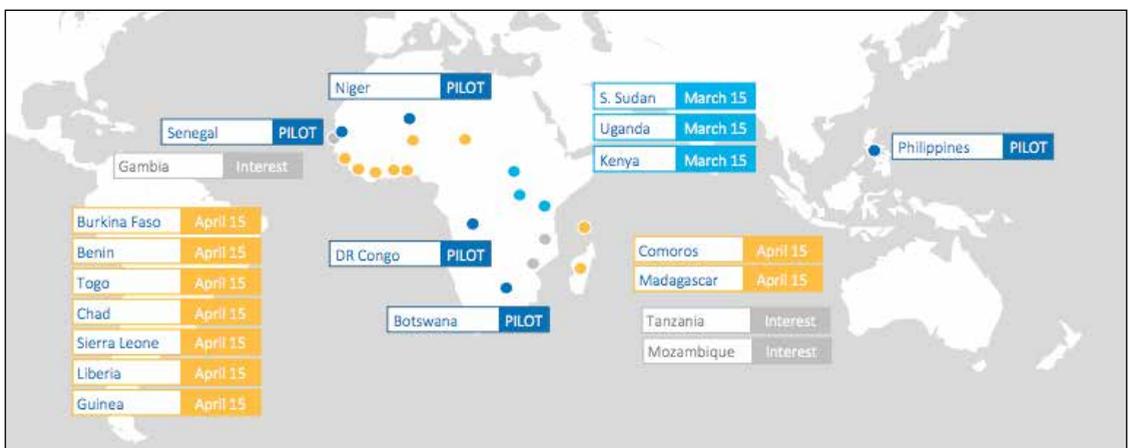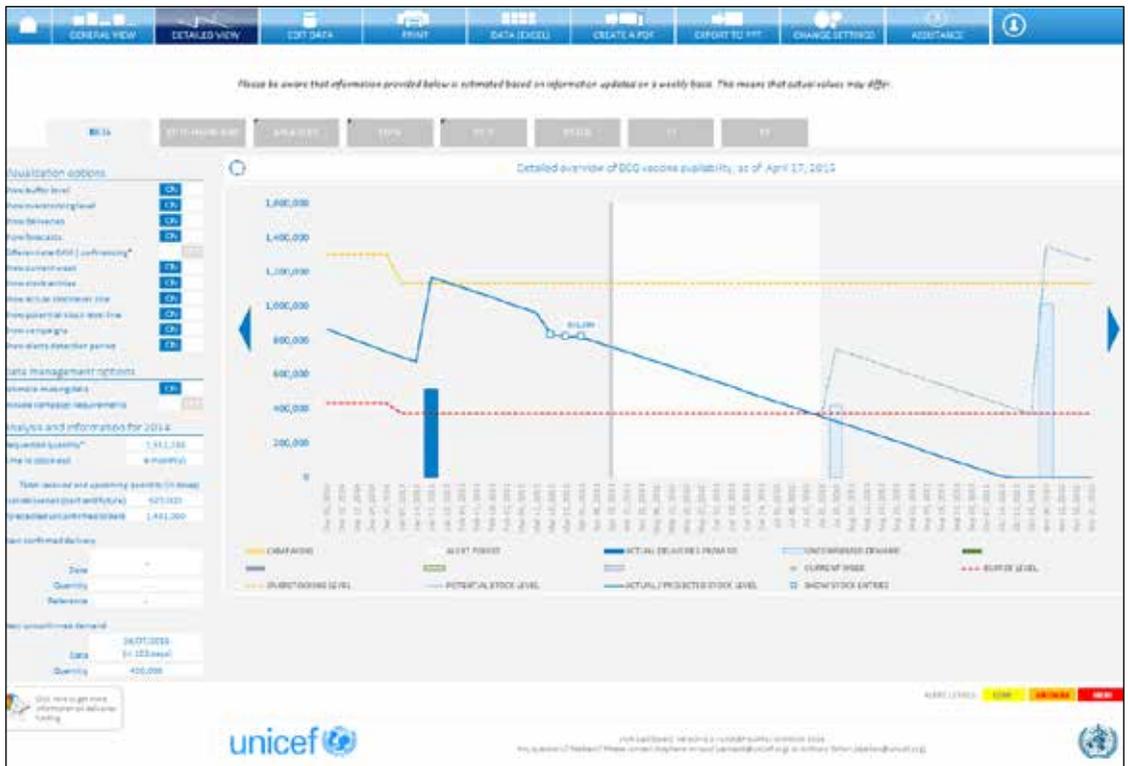
WEIGHT MEASUREMENT TAPE (WMT)

For more information, visit:
http://bit.ly/unicef_innovation_weight-measurement-tapes

The Children's Mercy Hospital and clinics in the United States has designed and validated "The Mercy Method," which consists of two new devices made from standard paper. 2D- and 3D-Mercy Tapes, estimates weight by using surrogates of both height (humeral length) and girth (mid-upper arm circumference). The method does not require body length (which may be difficult to obtain in uncooperative or combative children) or age (which may be unavailable), and can be applied to children aged two months through 16 years.

Both Mercy Tapes have been validated for accuracy in Africa, Asia and the United States across extremes of weights. The children's Mercy Hospital has agreed to waive licensing costs to any organization working in humanitarian aid. The initial aim of this study was to assess if the Mercy Tape could fill the gap whenever weighing scales were missing or could not be used to complement the use of traditional weighing scales in programme implementation, notably medication prescription.

To date, field trials have been conducted in DRC and Benin where health workers collected 4600 unique measurements.

Supported by:
Children's Mercy Hospital & Clinics; Benin Country Office; Democratic Republic of Congo Country Office
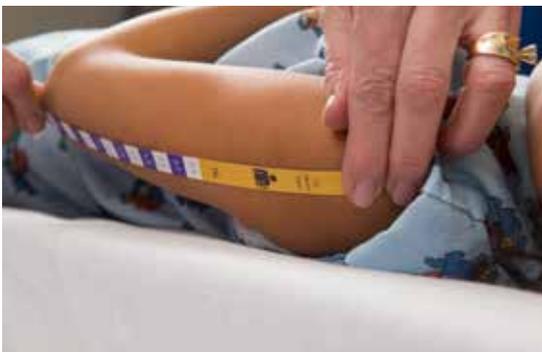
VIRTUAL REALITY & VULNERABLE GROUPS (CLOUDS OVER SIDRA)

For more information, contact:
support@myworld2015.org
kristin.gutekunst@undp.org

Clouds over Sidra is a collaboration between the United Nations Millennium Campaign (UNMC), UNICEF Jordan, Samsung, Chris Milk and his production studio VRSE.works. The virtual reality experience uses Samsung Oculus VR Gear equipment to fully immerse the viewer into the life of a young girl living in the Za'atari Syrian refugee camp in Jordan as she guides you through her daily life. The film is also available to the general public through Google cardboard. It is the first in what is planned to be a series of films demonstrating global development challenges.

In the final year of the MDGs, continuous evidence has pointed to the fact that global development goals will not be reached unless we concentrate on helping and building resiliency in the most vulnerable communities. Several countries which were on track to reach the MDGs were derailed by humanitarian situations, such as war, natural disasters, and health epidemics. In addition, the new global goals provide a renewed focus on leaving no one behind. Thus, the aim of this initiative is to bring the experience of vulnerable communities straight to decision makers, thereby creating deeper empathy and understanding.

Supported by:
United Nations Millennium Campaign, UNICEF Jordan, Samsung, VRSE.Works

HONEY BEE NETWORK

For more information, visit:
www.sristi.org

The Indian Honey Bee Network by Society for Research and Initiatives for Sustainable Technologies and Institutions (SRISTI) has created new benchmarks of frugal and green innovations often by the poor for the poor. Outstanding traditional knowledge and contemporary grassroots innovations are scouted through volunteers and shared through various means including Honey Bee Network newsletter in seven Indian languages as well as in Chinese. Cross-pollination of ideas, overcoming anonymity of creative people, sharing benefits with the knowledge providers became some of the key principles of professional discourse.

The Honey Bee Network has touched the lives of common people in more than 70 countries through sharing of its contents and receiving queries for innovations. The Honey Bee Network database itself has pooled more than 200,000 ideas, innovations and traditional knowledge practices from over 550 districts in India.

UNICEF is partnering with SRISTI to scale-up the concept and model of the Honey Bee network beyond India to make its database of innovations available globally.

REMOTE DIAGNOSTICS

For more information, visit:
http://www.ru.ac.za/biotech/about/

Rhodes University's Biotechnology Innovation Centre (BIC) and UNICEF's Global Innovation Centre (GIC) are partnering to accelerate the work on aptamers and sensing technology for early disease detection to deliver multi-strip tests that can be used by Community Health Workers (CHWs) to more accurately and quickly diagnose diseases that have significant impact on children.

Aptamers are single-stranded DNA or RNA molecules that can bind to a specific and pre-selected target. The BIC has synthesized aptamers to develop reagents for CD4 (HIV), with malaria (Malaria Falciparum) underway. The BIC has developed single-strip tests for these diseases using these reagents that provide results within 20 minutes. The partnership will focus research on synthesising new aptamers that are specifically relevant to maternal and child health and developing strips that can sense for multiple aptamers.

The potential impact of this work on child and maternal health could be considerable:

- Delivering laboratory-quality results within minutes versus days or weeks;
- Reducing the cost of such tests significantly;
- Optimising on the opportunity to undertake multiple tests at once in environments where a person may be affected by more than one disease and these interactions are critical to appropriate treatment and recovery;
- Providing access to tests that most women in the developing world do not have currently and cannot afford in the way that these tests are currently administered;
- Eliminating multiple clinic visits for children and mothers;
- Increased efficiency of placing an infected person on appropriate therapy e.g. malaria, and increased cost effectiveness by not placing them on a drug to which the disease is resistant.

Supported by:

Rhodes University, South Africa

RHODES UNIVERSITY
Where leaders learn

ACRONYMS

AAC	Augmentative and Alternative Communication
ADA	Austrian Development Agency
ADAP	Adolescent Development and Participation Unit
APO	Application Programming Interface
ARIDA	Acute Respiratory Infection Diagnostics Aid
AVSI	Association of Volunteers in International Service
BIC	Biotechnology Innovation Centre
BMGF	Bill and Melinda Gates Foundation
BYFY	By Youth For Youth
CAR	Central African Republic
CMS	Content management system
CPIMS	Child Protection Information Management Systems
DPKO	Department for Peacekeeping Operations
DPT	Diphtheria, pertussis and tetanus
DRC	Democratic Republic of the Congo
eLS	eLearning Sudan Project
EPI	Expanded Programme on Immunisation
ESA	Eastern and Southern Africa
ESARO	Eastern and Southern Africa Regional Office
EU	European Union
GBVIMS	Gender-Based Violence Information Management System
GIC	Global Innovation Centre
HCD	Human Centered Design
HIS	Health Information System
HMIS	Health Management Information System
IF	Innovation Fund
IoGT	Internet of Good Things
IRC	International Rescue Committee
MENA	Middle East and North Africa
MIT	Massachusetts Institute of Technology
MNOs	Mobile Network Operators

OCHA	Office for the Coordination of Humanitarian Affairs
OSRSG-CAAC	Office of the Special Representative of the Secretary-General for Children and Armed Conflict
PBEA	Peacebuilding Education and Advocacy
PEN	Peer Educators Network
SIDA	Swedish International Cooperation Agency
SMS	Short message service
SRISTI	Society for Research and Initiatives for Sustainable Technologies and Institutions
TNO	Netherlands Organisation for Scientific Research
UASC	Unaccompanied and separated children
UK	United Kingdom
UN Foundation	United Nations Foundation
UNDP	United Nations Development Programme
UNFPA	United Nations Population Fund
UNHCR	United Nations High Commissioner for Refugees
UNMC	United Nations Millennium Campaign
USAID	United States Agency for International Development
WCA	West and Central Africa
WCARO	West and Central Africa Regional Office
WFP	World Food Programme
WHO	World Health Organisation

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