UNICEF - Drones for Delivering Results for Children

Background

Innovation through new ideas, products and practices increasingly is seen as a force for social change. At the same time, there is growing consensus that empowering the millions of women who live in poverty is essential both for their intrinsic human rights and broad benefits for global development and economic growth.[1] Phills, Deiglmeier and Miller (2008) define social innovation as "a novel solution to a social problem that is more effective, efficient and sustainable, and for which the value accrues primarily to society as a whole rather than private individuals".[2] A cycle of change can be triggered by women's use of a seemingly simple technology; a shift in social attitudes about what is possible for women; or increased access for women to employment opportunities, savings and credit.

Innovations in technology have the potential to address a broad spectrum of areas where women are disadvantaged: knowledge and information, reproductive health, infrastructure, livelihoods, mobility and communications, among others. Technologies—such as the Internet, cell phones, alternative energies, water filtration and sanitation, reproductive technologies, agricultural innovations—can empower women on multiple levels and spheres: individual, household, economic, social and political. Since 2014, UNICEF has embraced innovation as one of its key strategies to achieve results for children.

Intervention

The potential applications of drones are broad. The use of drones before 2010 was primarily associated with military operations. Governments have also recognised that the drone market represents a substantial opportunity for attracting investment. Global competition to attract private investment in the unmanned aerial vehicle (UAV) industry is high and according to one industry expert, "those countries with the most flexible rules for UAVs are expected to attract the high-value UAV businesses to conduct research and testing.

UNICEF's principles for innovation and technology for development provide guidelines to inform the design of technology-enabled programmes – they emphasise a substantial amount of exploration with users and within the ecosystem to determine the appropriate technology solution to augment programming for local needs. They also democratise the innovation process through the application of open-source principles. At UNICEF, a country office can own the innovation process for testing and scaling the use of drones in local operations. However, there is also a formal role for identification and testing of technologies more broadly across UNICEF in the mandate of the Office of Innovation.

The first exploration of drones documented by UNICEF began in 2014, through the Malawi Country Office. Today, the use of drones continues in the recognition and exploration and development stage, with more advancements underway in Kazakhstan, Malawi and Vanuatu to understand and explore potential use cases in specific programme areas.

Malawi, Kazakhstan and Vanuatu Country Offices identified and explored direct applications of drones to address specific challenges, supported community engagement activities for the socialisation of drones in the field, and support regulators and government agencies in the development of drone regulations and use cases.

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[1] Malhotra A, Schulte J, Patel P, Petesch P, Innovation for Women's Empowerment and Gender Equality, ICRW, 2009
[2] Phills JA, Deiglmeier K, Miller DT, Rediscovering Social Innovation, 2008

Results

- Work in the area of untested, innovative technologies is highly attractive to the public. UNICEF has received substantial media attention on drones work conducted in Malawi, and, to a lesser extent in Vanuatu. Media attention can be an incentive to pursue innovation within the organisation, with many articles highlighting individual innovators.

- Considering the scale of investment (less than US$500,000) used for the work described in this case study, the extent by which UNICEF has mobilised government and the private sector is impressive.

- Drone activities in Kazakhstan, Malawi and Vanuatu are increasingly focused on the long-term sustainability and scalability of specific use cases. This has therefore included consideration of the broader drone support ecosystem in operating countries, such as the presence of capable service providers and drone flight operators.

- Country Offices in Malawi and Vanuatu have also focused their efforts on demonstration and refinement of specific use cases, particularly in the health sector, and further strengthening of the drone ecosystem. The forward-looking focus on demonstration (as opposed to experimentation) of drones as a viable technology for humanitarian use is positioned as enabling the scalability of the drone.

Learnings

- Tying the use of technology to specific outcomes is vital to gain the buy-in of stakeholders.

- Ability to effectively attract and collaborate with the private sector and academic institutions are necessary for the success of early-stage testing activities.

- Exploration of new technologies necessitates collaboration and requires careful consideration of the capacity and suitability of partners at different points in the innovation process.

- Providing tangible value to partners, either financial or non-financial, has been identified as a critical incentive in enabling the innovation process.

- Development of a theory of change results framework and metrics for technological outcome activities make the demonstration of outcomes easier.

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