

PRESS RELEASE

RWANDA LAUNCHES THE FIRST DRONE MEDICAL DELIVERIES PROJECT

Kigali, October 14, 2016 – The Government of Rwanda, in partnership with a California-based robotics company, Zipline, Inc., is launching the world's first national drone delivery service during a ceremony in Muhanga District. Starting today, the Rwandan government will begin using drones to make up to 150 on-demand, emergency deliveries per day to increasing efficiency of blood to 21 transfusing facilities located in the western half of the country.

Different surveys have ranked Rwanda among African top performers in regards with improvement of Maternal and Child Health, fight against fatal infectious diseases such as HIV and other communicable diseases. The Demographic and Health Survey 2014-2015 has shown a great achievement in reducing under-5 children mortality rate by almost 75% in 16 years and in ensuring that almost 100% of births are attended by a skilled provider.

This project is initially aimed at reducing the average delivery time of blood products across health facilities in Rwanda and also at reducing waste of some blood products that has a very limited shelf life.

"Drones are very useful, both commercially and for improving services in the health sector. We are happy to be launching this innovative technology and to continue working with partners to develop it further," said HE the President of the Republic of Rwanda, Paul Kagame.

Blood transfusion has greatly contributed to Rwanda's achievements especially in areas of reducing the impact of diseases that require transfusion, improving maternal health, reducing consequences of Malaria and other major infectious diseases that lead to blood or other blood products transfusion. That is why the Government of Rwanda has given due value and importance to strengthening the blood program by putting in place strong infrastructure for safely and quickly delivering Blood products to those in need.

The problem

Postpartum haemorrhaging and malaria are the leading indications for transfusion, respectively accounting for 28% and 16% of total blood issued to hospitals.

Blood products require storage and transport at safe temperatures and some (like platelets) have a very limited shelf life. Because there are many different blood products and no way to accurately project future needs, many transfusion clinics do not keep all the blood they may need in stock.

During lengthy rainy season, long distance and hilly landscape roads sometimes become difficult for emergencies. Blood safety can be affected in some instances, some used means of transport that do not meet required standards and which may impair the quality of blood.

The Solution

Rwanda's national drone delivery program enables blood transfusion clinics across the Western half of the country to place emergency orders by cell phone text message. The orders are then received by both Zipline at its base and NCBT. Zipline is , based in Muhanga District where the company maintains a fleet of 15 drones, also called Zips.

Each Zip can fly up to 150 km round trip—even in wind and rain—and carry 1.5kg of blood, which is enough to serve a patient in need. Zips take off and land at the Nest, and make deliveries by descending close to the ground and air dropping medicine to a designated spot called a "mailbox" near the health centers they serve. Zipline will make 50-150 emergency flights a day to 21 transfusion clinics across the Western Half of Rwanda and can fulfil orders in around 30 minutes.

Rwanda plans to expand Zipline's drone delivery service to the Eastern half of the country in early 2017, putting almost every one of the country's 11 million citizens within reach of instant delivery of blood and other blood products.

"The inability to deliver life saving medicines to the people who need them the most causes millions of preventable deaths each year around the world. Zipline will help solve that problem once and for all," said Zipline CEO Keller Rinaudo. "We've built an instant delivery system for the world, allowing medicine to be delivered on-demand and at low-cost, anywhere."

Zipline, Inc. has already constructed a drone hub in Muhanga and the Government of Rwanda provided other utilities like power and fiber connectivity. Through the Ministry of Health/RBC blood storage equipment was also installed at the site, and an appropriate infrastructure was set up at Rwanda Civil Aviation Authority in order to ensure security of both drones and other public transportation aircrafts using the Rwanda air traffic.

The project begins with a soft launch with five facilities: Kabgayi, Nyanza, Gitwe, Kirinda and Muhororo District Hospitals but a total of 21 hospitals will ramp up over the first 1 year after RCAA and MOH testing phase approval. More sites will be added with the construction of additional hubs to cover the whole country after successful performance evaluation of the first year of drone operations.

This project is being implemented by central partnership between the Ministry of Health, the Ministry of Youth and ICT for being part of the ICT related part of this project, the Ministry of Infrastructure through the Rwanda Civil Aviation Authority for having assured the security of Rwanda general air traffic and the Zipline that is rolling out this interesting project.

Rwanda and Beyond

The commercial partnership between Rwanda and Zipline is expected to improve efficiency of blood and other blood products in the first 3 years. Through this effort, Rwanda is leading the world by using cutting-edge technology to leapfrog the limitation of road infrastructure and to provide cutting edge healthcare access to all its 11 million citizens.

The work in Rwanda is being further supported by an international partnership between Zipline, UPS and Gavi, the Vaccine Alliance. Thanks to a \$1.1 million grant from the UPS Foundation, the partnership will study Rwanda's blood drone delivery operation with an eye towards the expansion of drones in the country.

About RBC

Rwanda Biomedical Center is the Ministry of Health implementing institution of which the mission is to promote quality affordable and sustainable health care services to the population through innovative and evidence based interventions and practices guided by ethics and professionalism. It is composed bydivisions which include the National Centre for Blood Transfusion that performs activities of Mobilization/Education and Laboratory activities with the major role of collecting and donating blood for patients in need.

About Zipline

Zipline is a robotics company based in California. The company—which includes seasoned aerospace veterans who previously worked at companies and organizations like SpaceX, Google, Boeing, and NASA—designs and manufactures autonomous aircraft for delivering lifesaving medicine to the world's most difficult to reach places.

Zipline's long-term mission is to build instant delivery for the planet, allowing medicines and other products to be delivered on demand and at low cost without using a drop of gasoline. Zipline is supported by some of the smartest investors in the world, including: Sequoia Capital, Google Ventures, SV Angel, Subtraction Capital, Yahoo founder Jerry Yang, Microsoft co-founder Paul Allen, and Stanford University.

About UPS

UPS (NYSE: UPS) is a global leader in logistics, offering a broad range of solutions including the transportation of packages and freight; the facilitation of international trade, and the deployment of advanced technology to more efficiently manage the world of business. Since its founding in 1907, UPS has built a legacy as a caring and responsible corporate citizen, supporting programs that provide long-term solutions to community needs.

Founded in 1951, The UPS Foundation leads its global citizenship programs and is responsible for facilitating community involvement to local, national, and global communities. In 2015, UPS and its employees, active and retired, invested more than \$110 million in charitable giving around the world.

About Gavi

Gavi, the Vaccine Alliance is a public-private partnership committed to saving children's lives and protecting people's health by increasing equitable use of vaccines in lower-income countries. The Vaccine Alliance brings together developing country and donor governments, the World Health Organization, UNICEF, the World Bank, the vaccine industry, technical agencies, civil society, the Bill & Melinda Gates Foundation and other private sector partners. Gavi uses innovative finance mechanisms, including co-financing by recipient countries, to secure sustainable funding and adequate supply of quality vaccines.

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