

Drone technology helps boost healthcare supply chains in Africa

Health workers serving remote communities in the Democratic Republic of Congo (DRC) must often undertake a six-day return journey to collect vaccines, traversing dense tropical forests and often the raging Congo River and its tributaries. Drone technology is offering a lifesaving solution to the challenges, including helping to ensure that cold chains are maintained, and vaccine quality is not compromised.



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In a presentation at the recent Africa Supply Chain in Action virtual conference, which was hosted by The Professional Body for Supply Chain Management (Sapics) and Smart Procurement, Freddy Nkosi, DRC country director for VillageReach, shared the **Drones for Health** success story, a project focused on getting vaccines and supplies to hard-to-reach rural communities, however, the applications of drones in healthcare will extend to congested cities, too.

VillageReach is a non-governmental organisation that is striving to improve communities' access to healthcare and life-saving medicines and vaccines in remote rural areas in developing countries. In the DRC, with funding from Gavi (The Vaccine Alliance), VillageReach, in partnership with the Ministry of Health and the Civil Aviation Authority of the DRC, is using drones to transport vaccines and other supplies to isolated villages and communities.

Nkosi says that the **Drones for Health** project is being piloted in the DRC's northwest province of Équateur. "This is a province with many geographical challenges. It has 18 health districts, more than half of which are only accessible by river. This makes the supply chain and transportation of vaccines from the provincial storage to the remote health storage facilities exceedingly difficult, especially during the rainy season when there is often flooding."

A round trip to the Équateur province, which involves taking a non-motorised boat down a river, can take up to six hours. The drones completed the one-way journey in just 20 minutes. Nkosi explains that the drones are only being deployed for the hardest to reach locations in the DRC, which are inaccessible by motorcycle or 4 x 4 vehicle.

Transportation, cost efficiencies

Studies are underway to assess the affordability of drones versus conventional transport in other areas. He notes that the drones being used can fly up to 80km at a speed of up to 115km per hour. "The technology is still developing, so we can

expect fewer limitations in the future. While our drones can fly up to 80km, we are setting up 'refilling stations' to reach health facilities beyond 80km. For instance, if the health facility is located 400km from the distribution centre or warehouse, there will be five stations where the drone will land after 80km and the local team will change the battery to enable the drone to fly to the next station."

Since the drones do not include cameras, Nkosi says privacy is not an issue, and to date, there have been no safety problems. The drones are not operating within a 15km radius of an airport, he states.

Nkosi believes that it is only a matter of time before many countries and communities adopt drones for deliveries, even in urban areas. He says that in the DRC's capital Kinshasa, the blood transfusion service is exploring the use of drones for urgent deliveries of lifesaving blood due to the city's poor infrastructure and traffic congestion.

Ensuring industry survival

The inaugural Africa Supply Chain in Action Conference and Exhibition was one of Africa's biggest online event for the supply chain and procurement profession, bringing together hundreds of delegates from around the continent. "The Covid-19 crisis has put the spotlight on supply chains and pushed supply chain professionals to their limits. Expertise in supply chain and procurement management, logistics and distribution has never been more important than it is today. The imperative to ensure that businesses and economies can survive and thrive beyond Covid-19 gave rise to this important event and the collaboration between co-hosts Sapics and Smart Procurement," says Keabetswe Mpane, Sapics president.

The event forms the foundation of the ASCAnation, which will provide supply chain professionals across Africa with a platform from which their voices can be heard.

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