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Dept. of Health Uses Drone to Transport Live Bacteria Samples From St. Croix to St. Thomas

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Guinn Partners founder Colin Guinn, seen here on a previous occasion with the rather huge DMI DS30 By. Guinn Partners

In a first for the unmanned aerial system (UAS) industry, Skyfire Consulting, along with Doosan Mobility Innovation Inc., the U.S. Department of Health and other collaborators recently made a 43-mile open-ocean drone crossing between St. Croix and St. Thomas, the V.I. Dept. of Health has made known.

The flight, which was carrying simulation vials as a surrogate (e.g. clinical diagnostic samples, vaccines, etc.) in a temperature-controlled payload system completed as an initial proof of concept for the V.I. D.O.H.

“In the past, during epidemics and following the 2017 hurricanes, the Department of Health had to rely on any means possible to transport critical health related materials. In some cases boats had to be used, when planes were grounded. While effective, these were not the most efficient or reliable transport following a disaster,” said Brett Ellis, Public Health Laboratory director for the USVI Department of Health. “Being able to provide materials and results back to clinicians immediately will definitely help in terms of patient care, especially for emergencies.”

Drones have been tested internationally in the past, but this test marks a critical milestone for domestic use of drones in public health, the V.I. D.O.H. said. The concept was developed over the course of two years between the local health department and Skyfire, the country’s leading public safety and health UAS consultancy.

“The purpose of doing all of this was to enable the USVI Department of Health to provide more efficient services, test results and vaccines to the citizens of these islands,” said Matt Sloane, CEO and co-founder of Skyfire. “This win is a very important first step towards that goal.”

The team completed the 43-mile flight in 1hr and 43 minutes on Doosan’s hydrogen fuel cell powered DS-30 aircraft. The tank had nearly 30 minutes of hydrogen gas remaining upon landing.

“This test was a great opportunity to prove the advantages of long endurance drones, and it’s really encouraging to see hydrogen fuel cell technology being used to help people,” said Doosoon Lee, CEO of Doosan Mobility Innovation Inc., a subsidiary of Doosan Group. “We will continue to collaborate with all of our partners at Skyfire, Ready H2, and Guinn Partners until we make this proof of concept fully operational.”

“This is an incredibly exciting day for all of us,” added Mr. Sloane. “As difficult as it was to follow the aircraft with a boat to maintain line-of-sight, I’m looking forward to next steps where we can do these flights beyond visual line of sight.”

Utilizing its temperature-controlled payload system, the drone was used to transport live bacteria samples from a hospital on St. Croix to a testing facility on the neighboring island of St. Thomas. This involved crossing 43 miles (69 km) of open ocean, according to [NewsAtlas](#).

Citing Guinn Partners, NewsAtlas said it can ordinarily take up to a week before patients’ biological fluid samples are transported between the two islands by manned aircraft – in the case of illnesses such as Dengue fever, the infection can progress to dangerous levels within that amount of time. Because using a drone is much cheaper and simpler, though, samples could conceivably be sent to St. Croix immediately.

