

Linking Drones Tests the Waters in the Philippines



The cargo drone from Linking Drones

OVERVIEW	
Flying Labs	Philippines Flying Labs
Geographic area	Luzon, Philippines
Date range	June – September 2024
Sector program	Health Robotics
Main SDGs	GOAL 3: Good Health and Well-being GOAL 9: Industry, Innovation and Infrastructure GOAL 10: Reduced Inequality GOAL 11: Sustainable Cities and Communities

SCOPE	
Project stakeholders	<ul style="list-style-type: none"> ● Linking Drones (LD) - SPAIN ● The people of Caramoan and Infanta, Quezon
People impacted	The communities of Caramoan and Quezon.
Number of people impacted	Since it is a proof of concept and testing the unit, the only impacted people are the recipients of medicines and those who were part of the testing (around 20 people).
Problem statement	The Philippines is made up of a vast collection of island and mountain communities. These remote island and mountain communities are difficult to reach because of limited transportation infrastructure to deliver vital essential supplies.

	Using cargo drones to help augment the service delivery might be a much-needed solution in these areas.
Project objectives	<ol style="list-style-type: none"> 1. To demonstrate the feasibility of the cargo drone from Linking Drones to cross water and mountains <ol style="list-style-type: none"> a. To conduct test flights with a distance of 1-2 km b. To conduct test flights with a distance of 5-6 km c. To conduct test flights with multiple stops 2. To train the staff of Philippines Flying Labs on the use of the cargo drone from Linking Drones.
Scope	We scouted for suitable test flight locations since this is a new technology and has not been tested outside of Europe. We searched for suitable island and mountain communities to test the durability of the cargo drone from Linking Drones.
Outcome	<p>We were able to successfully fly the drone over oceans and mountainous regions with varying settings. Philippines Flying Labs staff were also trained by the engineers from Linking Drones so they can fly the drones autonomously and troubleshoot if needed.</p> <p>With this proof of concept and demonstrated the feasibility of fully autonomous flights, we will test the drone in actual community settings.</p>
Impact	The cargo drone from Linking Drones is easy to operate and affordable so it can easily be incorporated into their system to improve service delivery in the mountain and island communities.
Challenges	Budget constraints by the community to buy the set up.
Next steps	Testing the drones in actual island and mountain communities.

COMMUNITY ENGAGEMENT AND STAKEHOLDER SUPPORT

Consent for cargo flight	We coordinated with the local community leaders weeks in advance so they can suggest the test sites for our demo flights.
Community engagement activities	We contacted the congressman of Caramoan who connected us with the local point person (through phone calls and text messages).
Community groups engaged with	Government officials, community in general, representative of community-based organization.
Community attendance	5 people.
Community feedback	They were open to having this demo flight in their areas since they have needs for this kind of transport service.
Stakeholder support	We showed the local community members how to operate the drone and demonstrate the ease of operability.

CARGO

Cargo transported	1 Box of Amoxicillin, umbrella and banana
Cold chain	None.

HARDWARE AND SOFTWARE

Cargo drone	The cargo drone from Linking Drones.
Precision landing	GPS/satellites.
Flight plan software	Mission planning software from Linking Drones.

FLIGHT OPERATIONS

Delivery distance(s)	1 km – 6 km distance
Number of flights	10
Number of deliveries	4
Flight altitude	60 – 100 meters above ground level
Total cargo delivered	Medicines, food, umbrella
Total distance flown	1-6 km
Take-off/landing sites	Yes and with multiple drop off points

COST BENEFIT ANALYSIS

Speed savings	1 min vs 30 min of land travel / boat travel
Cost savings	Php. 1500 per trip for land/boat transport