Designed on the ground, proven in the air

# Medical drone delivery in Madagascar since 2019

Since 2019, AerialMetric has designed, built and flown the cargo drones of health-product delivery programmes in Madagascar. This page sets out what was done, for whom, who paid for it, and what we are ready to deploy.

## A DATED, DOCUMENTED PROGRAMME

Since 2019, our drones have linked take-off bases with health centres that roads serve poorly: vaccines, medicines, reproductive health products and patient samples.

AerialMetric acted as **manufacturer and operator**. We designed and built the aircraft, set up the bases, supplied the flight crews, maintained the fleet and delivered the activity reports.

The main client was **PSI** (Population Services International), a health NGO that coordinated with district pharmacies and primary health centres. Funding came from PSI's donors, who were not the client.

## PROGRAMME AT A GLANCE

PERIOD

Since 2019

AERIALMETRIC'S ROLE

Manufacturer and operator: aircraft design and manufacture, bases, crews, maintenance, reporting

CLIENTS

PSI (main client); UNFPA; WeRobotics; Aviation Sans Frontières (DRC)

FUNDED BY

USAID (IMPACT programme), the Global Fund, FID (funded by AFD), Gavi

BASES IN MADAGASCAR

Maroantsetra, Toamasina, Befandriana Nord, Maintirano, Mahanoro, Bekily, Sakaraha, Vangaindrano

PRODUCTS CARRIED

Vaccines; essential medicines and primary health products; reproductive health products; patient samples

## WHAT THE EVALUATIONS MEASURED

**An independent evaluation for USAID.** The mid-term evaluation of the pilot, conducted for USAID by GH EvaLS in the districts of Maroantsetra, Antalaha and Mananara, concluded that "drones work". Stockouts were "virtually eliminated, increasing both product use and community confidence in quality". The time taken to respond to commodity needs fell from four days to one day or less, and supply point managers no longer had to spend two to four days each month travelling to the district warehouse.

**A cost-effectiveness study.** During the FID-funded programme around the Mahanoro base, a cost-effectiveness study presented by the Ministry of Public Health and PSI put drone delivery at **USD 116 per disability-adjusted life year (DALY) averted** over ten years, more than four times below the USD 540 threshold used for Madagascar. The gain is modelled mainly on malaria: family planning and vaccine stockouts are not counted.

**Cold chain, with WHO and WeRobotics.** For a public health project led by the World Health Organization, WeRobotics entrusted us with drone transport of samples for polio surveillance: more than twenty deliveries, followed by long-range flights. WeRobotics confirms that the cold chain was maintained at all times and that the project was a success.

Statements of satisfactory performance from PSI and WeRobotics are available on request, in particular for a tender.

Some earlier publications refer to our team as **Madagascar Flying Labs**, the WeRobotics network that AerialMetric hosted at the time.

## BEYOND MADAGASCAR: THE DEMOCRATIC REPUBLIC OF THE CONGO

In August 2024, Aviation Sans Frontières contracted AerialMetric to lease a cargo drone, with technical, operational and regulatory support, for the transport of health products in the DRC. The contract ran from 2024 to 2025.

## COMPANY BENCHMARKS, ALL ACTIVITIES

**11,000+**
**operational flights**
all drones, cargo and mapping missions, since 2019

**Since 2019**
**flights every day**

**ISO 9001**
**quality management system**
ISO 9001:2026 certification in progress

## READY TO DEPLOY

The capability built during this programme is in place, and we are ready to deploy for a ministry, a health programme or a donor.

**A base in under a month.** We set up a base wherever the programme needs one in under a month, and the first flights take place after one month.
**Aircraft and factory.** The S330 family is designed, built and maintained at our factory in Ambohibao, Antananarivo. Maintenance is done in-house.
**Methods.** Flight planning agreed with the client, written operating procedures, cold-chain transport with temperature monitoring, activity reports for each base.
**Training.** AerialMetric trains drone pilots and maintenance technicians. During the programme it also trained PSI and health-centre staff.
**Quality framework.** Our quality management system based on ISO 9001 covers the operation of the drones as well as their design and manufacture; ISO 9001:2026 certification is in progress.
Our clients and other projects are on the Track record page.

## OUR OFFER: A MEDICAL DRONE DELIVERY NETWORK

**Scoping with the ministry or programme** — Health centres to serve, distances, products, frequency and baseline. Evaluation indicators are agreed before the first flight.

**Permits and bases** — Applications to the civil aviation and health authorities; selection and set-up of bases and product storage.

**Training** — Pilots, technicians, depot and health-centre staff: everyone knows how to prepare, receive and report a delivery.

**Operations and measurement** — Scheduled and emergency flights; flight log, delivery times compared with road transport, aircraft availability, cost per delivery.

**Review and next steps** — Evaluation report, then extension in time, expansion to further districts, or hand-over of operations to the client's own teams.

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