Designed on the ground, proven in the air

Drone topographic surveys, orthophotos and LiDAR in Madagascar

We survey sites and corridors by drone, including hard-to-reach areas, and deliver georeferenced orthophotos, terrain models and plans ready for your software.

DRONE MAPPING AND TOPOGRAPHIC SURVEYING

AerialMetric has carried out drone surveys in Madagascar since 2018. Photogrammetry produces the orthophotos and elevation models; LiDAR is offered where vegetation hides the ground.

We have every platform: from small drones to VTOL drones with a 3 m wingspan, up to aircraft for very large areas.

We plan the flights, apply for the flight permits, fly, process the imagery and deliver georeferenced data in the file format and coordinate system of your choice. Resolution is agreed in the quote.

This work is part of our drones' **11,000+ operational flights** (all drones, cargo and mapping missions, since 2019).

DELIVERABLES: ORTHOPHOTOS, DTM AND DSM, POINT CLOUDS, CONTOURS, PLANS

Orthophotos — Georeferenced 2D image mosaics, delivered in the format of your choice, for measuring distances and areas and tracking change from one survey to the next.

Digital terrain and surface models — A DTM describes the bare ground; a DSM includes vegetation and buildings. Both serve for relief, slopes and volume calculations.

Point clouds — The raw 3D survey, from photogrammetry or LiDAR, for your own processing.

Contour lines and plans — Contours and topographic plans derived from the terrain model, for route studies, planning and land tenure.

LiDAR — On request, in particular where vegetation hides the ground: the laser reaches the terrain beneath the canopy. The sensor is selected for each project, in the quote.

Geotagged photos and video — Geotagged stills and HD video to document a site, a corridor or a right of way.

SECTORS: MINING, CONSTRUCTION, ROADS AND STRUCTURES, LAND, ENVIRONMENT

Mining and quarries — Site topography, face monitoring, stockpile volumes.

Construction — Baseline surveys, progress monitoring, earthwork volumes.

Roads and structures — Corridor surveys for route studies; dams and hydraulic works; documentation of rights of way.

Land mapping — Base maps and parcel plans for land titling, cadastre and spatial planning.

Environment — Protected areas, deforestation, soil erosion, biodiversity monitoring.

HOW A DRONE TOPOGRAPHIC SURVEY WORKS

Your request — The area (KMZ, shapefile or coordinates), its size, the deliverable and the deadline. The quote sets ground resolution; formats and coordinate system are your choice.

Flight permits — We apply for a window wide enough to absorb bad weather. The quote is subject to the permits being granted.

Site reconnaissance — Access, take-off areas, ground control points. In the rainy season, access to the site often sets the schedule.

Flights — Automatic flights along a pre-planned pattern; ground control measured where the required accuracy calls for it.

Processing — Image stitching, computation of orthophotos and models, coverage check across the area.

Delivery — Georeferenced files in the agreed formats, on hard drive for large volumes.

CASE: AERIAL SURVEYS FOR ARTELIA

CLIENT

Artelia (engineering)

SCOPE

Assessment of sites with hydropower potential

LOCATION

Sites across Madagascar

PLATFORMS

Drone and aircraft

DELIVERABLES

Orthophotos (5 to 10 cm ground resolution) and digital surface models (DSM)

AERIALMETRIC'S ROLE

Drone data acquisition and processing

STATUS

Completed

KEY FACTS

2019

group founded

drone surveys since that year

11,000+

operational flights

all drones, cargo and mapping missions, since 2019

ISO 9001

quality management system

ISO 9001:2026 certification in progress