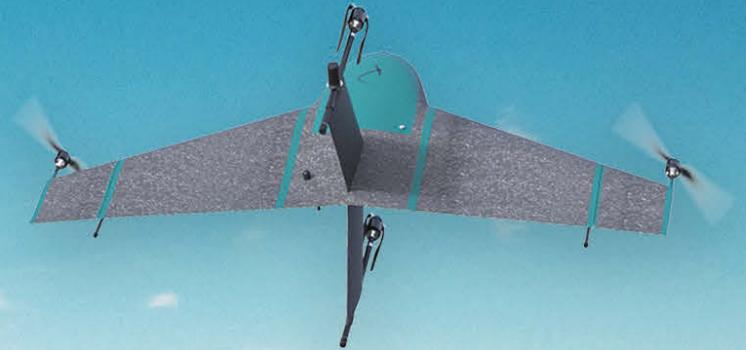


ATMOS UAV

Meet Marlyn,

the go-anywhere
mapping and land
surveying solution
made by surveyors
for surveyors.

www.atmosuav.com



**Robust
performance.**

**Save time &
reduce costs.**

MEET MARLYN

Vertical Take-off & landing

Take-off from everywhere
All you need is a 2x2m space!
Belly landings, nets and parachutes belong to the past: Marlyn lands gently, right on the spot where she took off.

Efficient mapping: cover more area

Marlyn maps 2.1 km² with a GSD of 2 cm in 40 minutes

High wind resistance

Marlyn is built to perform. She is the only drone in her class that can take-off and landing in harsh wind conditions up to 6 Bft (45km/h)

PPK survey grade geotagging

GPS augmentation by Post-Processed Kinematics for high precision & efficiency

In-house developed autopilot

Enjoy the hands-off experience of a fully autonomous flight from take-off to landing.

Smart battery system

In-house developed dual battery system with two batteries for redundancy: the one functions as a failsafe for the other. The batteries are closely monitored in terms of remaining energy, voltage, cell temperature etc.

Intuitive flight planning software

With MarLynk, planning missions is now straightforward and key surveying parameters can be changed at a glance.

Swappable payloads

Choose from our collection of sensor options, which enable you to conquer any project, like our industry workhorse, the 42 MP full-frame camera with high light sensitivity.

Advanced camera control

The camera is automatically configured by the autopilot, resulting in the correct focal distance and photo trigger events for sharper images at the right location for highly accurate models.

HOW IT WORKS



1 | PLAN

Our inhouse developed planning and flight software **Marlynk** allows you to generate the most efficient flight plan for your project with ease.

2 | CAPTURE

Take her out of her protective case, attach the wings, and with a safety checklist, take-off with a push of a button. After the mid-air transition to forward flight, **Marlyn** starts gathering the required images.

3 | PROCESS

Use your preferred image post processing software and transform automatically organized geo-tagged images into point clouds, orthophoto DEM and more.

4 | ANALYZE

The generated (3D) models can now be used to provide actionable insights by measuring distances, performing volumetric analyses, taking cross-sections and more.

BUNDLE COMPONENTS

Let's get in touch and choose together the best **Marlyn** configuration tailored to your needs and wants

- **Marlyn** main body, with electronics and autopilot
- Pair of detachable **Marlyn** wings
- RGB Sony camera for high quality mapping included lens battery, SD card, USB cable and charger
- **Marlynk** planning & ground control software and **Marlynk** modem
- Protective transportation backpack or flight case
- Two sets of flight batteries and dual battery charger including balancer boards
- Remote control & accessories

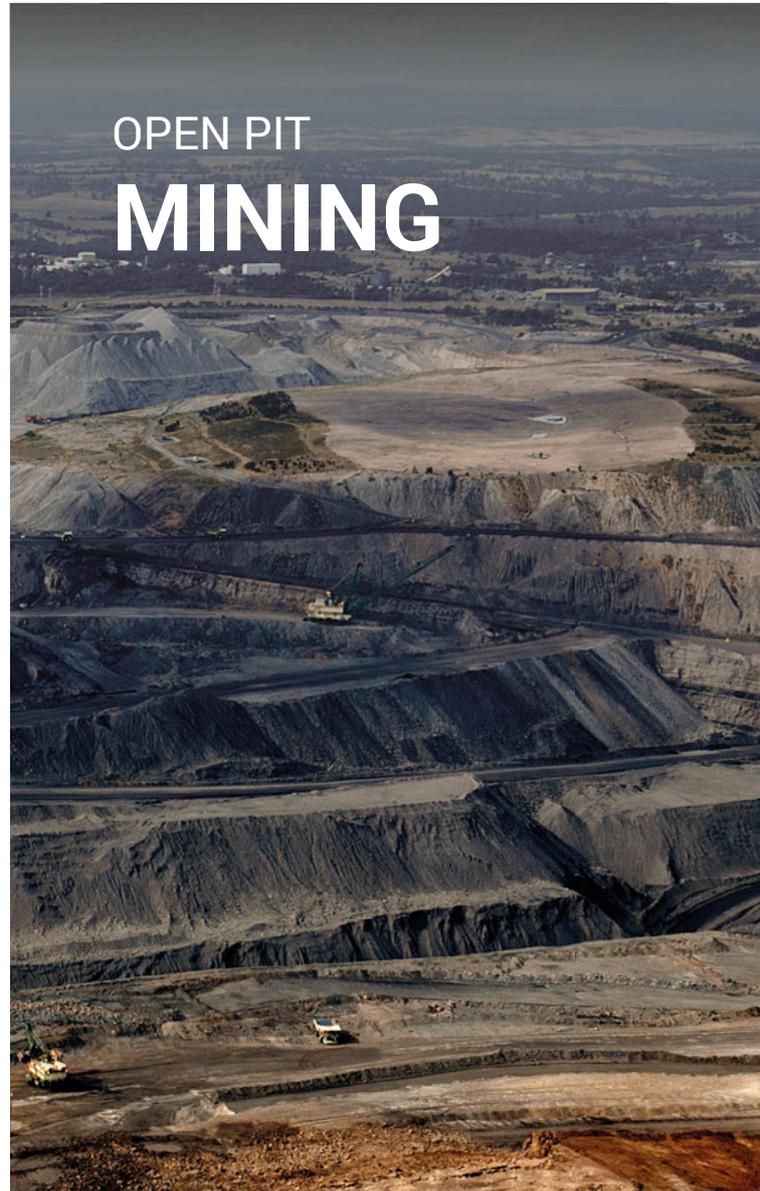
UPGRADES

- Full Post Processed Kinematics (PPK) module
- Sony RX1RII 42MP full-frame camera
- Flir Duo Pro R thermal camera
- Micasense RedEdge-MX, Altum multispectral camera
- Dedicated laptop/tablet
- and more



APPLICATIONS

Conquer
Any
Project



- **Generate Orthmosaics & 3D Point Clouds**
- **Build Digital Elevation Models & Contour Maps**
- **Perform Boundary & Topographic Surveys**
- **Develop As-built Drawings**
- **Measure Distances and Volumes**
- **Monitor Site Development Progress**

Marlyn improves operational efficiency, reduces downtime, and improves safety for surveyors and their equipment.

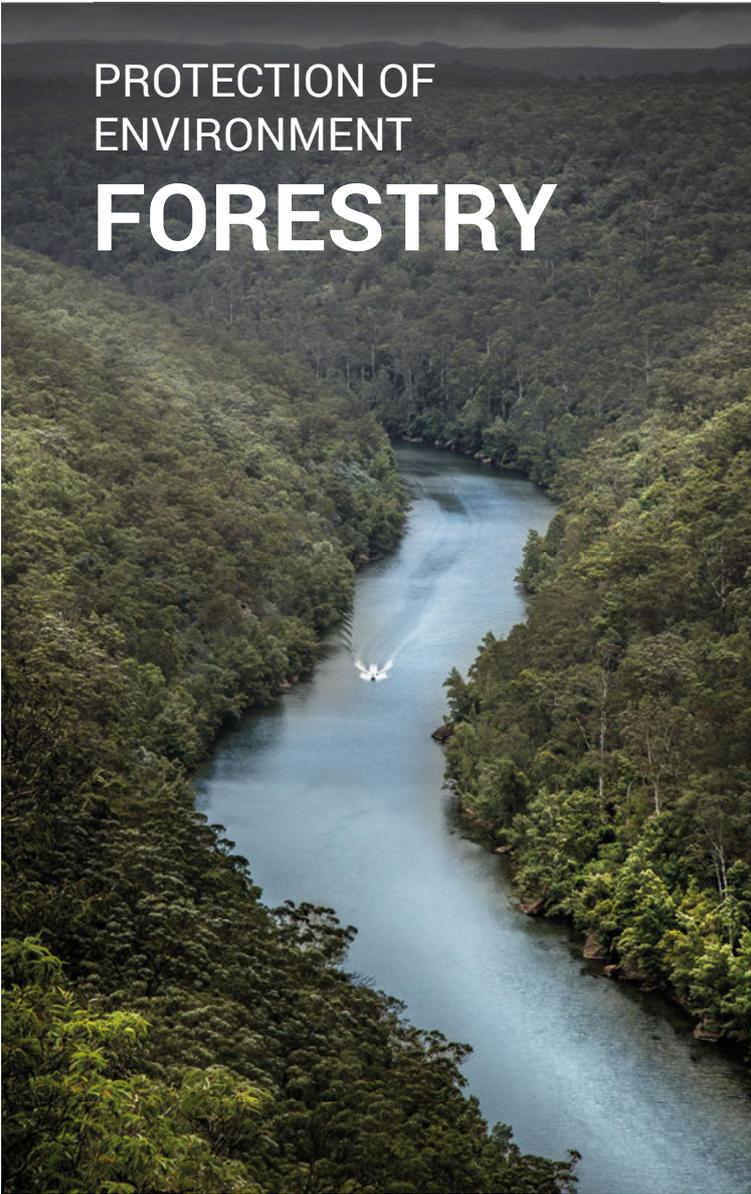
With PPK you can now achieve absolute X, Y, Z accuracies down to 1 cm (0.4 in), with fewer to no Ground Control Points needed.

- **Cliff and Rock Formations**
- **Keep Track of Production and Inventory**
- **Contour Maps**
- **Improve Site Planning and Management**
- **Slope Analysis**

Marlyn enables you to perform a survey from above, eliminating the need for surveyors to move around in the pit, minimizing corresponding downtime and greatly improving the safety of the surveyors.

Marlyn can map an area faster and much more efficiently when compared to ground-based surveys. Fewer man hours are needed to create larger and accurate data sets, resulting in reduced costs.

Marlyn can be easily deployed from any surface. This enables her to be used in a wide variety of surveying applications.

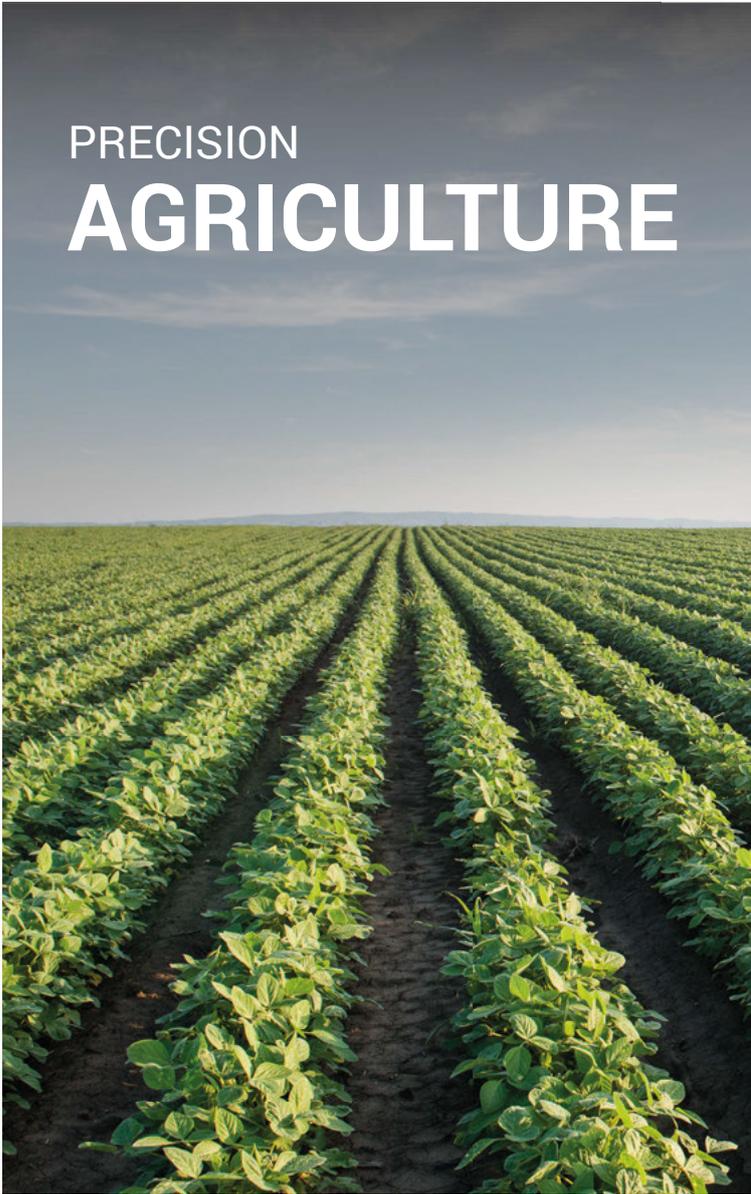


PROTECTION OF ENVIRONMENT **FORESTRY**

- **Detect Pest Infestations**
- **Quantify Moisture Levels**
- **Analyze Tree Crown Condition & Wildlife Damage**
- **Plan Reforestation**

The quiet and energy-efficient electric motors are not only environmentally-friendly but also reduce the impact of noise on humans and animals.

The combination of infrared images and NDVI (normalized difference vegetation index) produces images that can be used to measure intrinsic tree characteristics related to plant health, growth and biomass.



PRECISION **AGRICULTURE**

- **Identify Problem Areas in a Field**
- **Optimize Fertilization and Irrigation**
- **Minimize Pesticide Usage**
- **Estimate and Increase Crop Yield**

Multispectral cameras can detect light reflectance in the visible and invisible spectrum that can be used to determine the plant stress on an individual level.

Combining Marlyn with a multispectral camera gives you the opportunity to visualize the crop health for a large terrain.

OUTPUTS



“I wanted a reliable solution with high wind resistance. That’s why I chose Marlyn.”

Joaquim Borges de Macedo

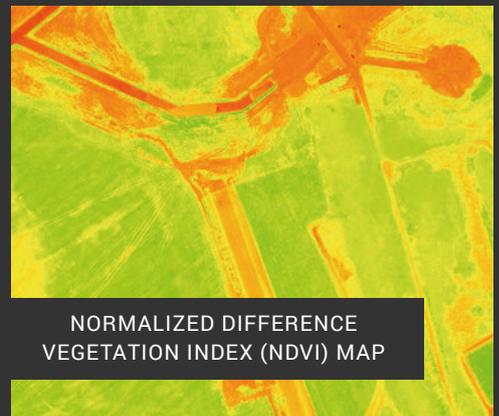
CJR Renewables | Coordinator of Topography



“The images are amazing. Superb resolution and well geolocated!”

Luis Vilasa

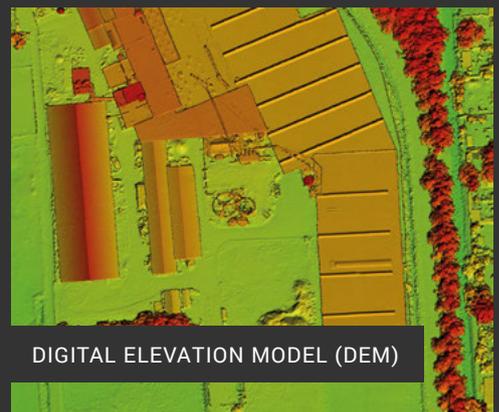
CGI | Senior Software Engineer



“Marlyn’s flexibility cuts our operational time in half by providing us with a huge amount of savings in both resources and equipment!”

Pieter Franken

Skeye B.V. | Managing Director



MEET OUR TEAM



**EMPOWERING
PROFESSIONALS
TO GATHER
GEO-SPATIAL DATA
EFFORTLESSLY**

In an evolutionary world of radical changes, being able to adapt and implement new technologies in your business processes is of vital importance for companies and professionals that want to stand out. Geospatial information is now the driver for business success across many industries and applications.

Knowing this at Atmos, we have developed Marlyn, the land surveying tool that will make this data collection effortless and precise.

Marlyn is the first VTOL drone that combines the flexibility of a multirotor with the efficiency and speed of a fixed-wing.

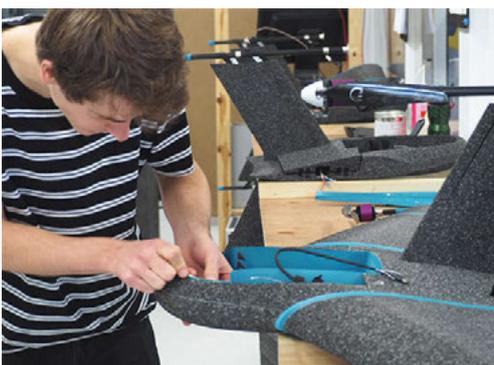
Thanks to our in-house developed technology and her unique design, Marlyn, is built to safely perform surveying/mapping projects in any terrain, even under windy conditions.

That's why we are the number one choice for those seeking both high accuracy and ease of use.

Marlyn, the go-anywhere mapping solution made by surveyors for surveyors.

Timeline | Milestones

It's been more than 6 years already... among multiple awards and continuous research and development projects, these are some of our major milestones.



- 2012** ■ First drone worldwide to combine VTOL with fixed-wing in a fully autonomous flight
- 2013** ■ Company Foundation
- 2014** ■ Atmos UAV is honored on the TU Delft Wall of Fame
- 2015** ■ First time Marlyn is used by the Dutch Government for mapping applications
- 2016** ■ Patented design approved for high wind resistance VTOL drone
- 2017** ■ Being the first after 50 years to map part of the tropical Silhouette island
- 2018** ■ Atmos UAV raised capital to fuel further growth and expansion
- 2019** ■ Marlyn operates in three continents



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MAXIMIZE YOUR SURVEYING CAPACITY