



**YellowScan**

| Designed to Innovate.

## SUCCESS STORY

# Media & Entertainment

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*We are very satisfied with the YellowScan Mapper solution. Long skeptical, we were convinced during a Demo Day in January 2021 held in Montpellier by YellowScan. Our customers are also satisfied with the deliverables we produce from our data processing. Transforming a complete data acquisition (produced by the Mapper) into a high added value deliverable has now become our strength.*

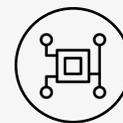
Paul Vandemeulebrouck -  
Director, Drone Expertise Centre



**Company:** Drone Expertise Centre  
**Website:** drone-expertise-centre.com  
**Country:** France



INTEGRATION  
DJI M300



SOLUTION  
MAPPER

Drone Expertise Centre's client, the Parc Asterix\*, in France, had an objective to produce very precise and complete topographic data on the whole of the amusement park and its surroundings.

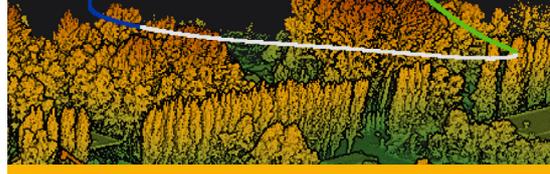
This mission was done as part of an impact study for a future project where it was essential to have highly resolution and accurate data without having to enter the area.

## Business challenge.

The Parc Asterix is bordered by forest classified as a Natura 2000 zone and is forbidden to pedestrians, therefore using an aerial LiDAR solution was essential.

In addition, the unexpected presence of a construction crane forced them to review their flight plans and to increase the flight height. The objective was to create a DWG plan with contour lines every 25cm.

\* The Parc Astérix is a theme park in France based on the comic book series. It is France's second largest theme park.



# SUCCESS STORY

## Solution

You want to learn more about LiDAR applications ?

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### Acquisition.

YellowScan Mapper was the only possible solution to get topographic data of the area as it is a purely aerial LiDAR solution that is ideally flown at 70m above ground level. It uses Livox's Horizon laser scanner and is designed to fit most professional drones and comes with an integrated camera module.



*YellowScan Mapper mounted on a DJI M300 RTK*

The YellowScan Mapper is ideal for general topography projects and is particularly suited for archaeology, forestry and post-disaster missions.

The Mapper seamlessly integrates with YellowScan's portfolio of software solutions, CloudStation and LiveStation, making it easy to remotely check data while the system is flying, and comprehensively post-process, visualize and export survey data.

### Mission parameters.

- **Survey size:** 160 ha
- **Number of flights:** 8 (2 days of flight)
- **Flight altitude:** 50m AGL (using DJI M300 RTK)
- **Acquisition:** 2 days for planning, 1.5 day for LiDAR acquisition and orthophoto, 5 days for processing

### Results.

The Mapper solution provided excellent point density with 60 Gb of data collected allowing to achieve the 25cm-interval for the contour lines. To verify their results, Drone Expertise Centre used their own GCPs (9) and the client's GCPs (38) which were done in 2018 and checked in 2020 by a land surveyor.

Drone Expertise Centre wanted to do fairly extensive quality control and took advantage of the client's GCPs that were already positioned on the park's grounds. However, the area needing to be surveyed by went a little further North and South, which is why Drone Expertise Centre decided to add another 9 GCPs.

These 47 GCPs were only used for controlling the validity of the final point cloud and not as tie points for strip adjustment processing.

#### Results obtained with GCPs :

- 86% (33/38) have an accuracy better than 5cm ;
- 60% (28/47) have an accuracy better than 3cm
- and 31% even have an accuracy better than 1cm



*Colorized LiDAR pointcloud of the Parc Asterix*

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