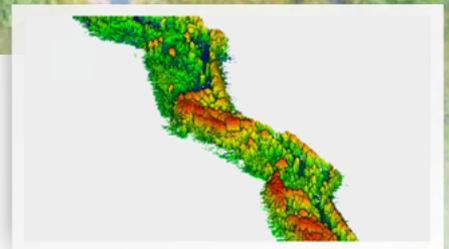# USE CASE
Civil **Engineering**

« Before we had YellowScan, it was very different... Now we have a new organization and we are able to get precise data fast and easily. » Andrejs Veliks, CEO, A-Geo

Business need

Latvia wants to create a road running along the 160km border with Bielorussia : the project is due to start in 5 months time. In order to organize the roadworks, a precise topographic map is needed. Most of the border is heavily wooded, with difficult-to-access areas including swamps covered on grass, ditches, bushes... A traditional survey on-foot would imply many safety issues, and would be time consuming with around 2 km covered per day and a point density lesser than 10 points/km. Timing, precision, point density and safety are key to the project.

Solution

YellowScan lightweight UAV LiDARs enable the quick and easy collection of detailed data about topography of the surveyed area, even in dense forest conditions.

Results

With a point density of 60 to 100 pts/m² even in dense vegetation thanks to the YellowScan Mapper's 3 echoes, and no problem with GNSS signal thanks to the UAV LiDAR receiving good GNSS network coverage, the job was done in less than 3 weeks, with high accuracy, precision, and low human risk.

Customer *Profile*

Company: **A-Geo**
Industry: **Civil Engineering**
Country: **Latvia**

Acquisition

Prior to the LiDAR flight, a flight with the *Phantom* UAV from DJI and a camera enabled the team to visualize the area they were covering. For example, they could identify water bodies covered in grass. A-Geo was able to follow the drone riding alongside with a quad : this enabled them to cover up to 13km in one flight. They did 2 flight lines along the border for a wider and denser point cloud.

Mission parameters

- Client: Government
- Location : Latvia
- Equipment: YellowScan Mapper + Geolux UAV
- Survey Size : 160 km
- Number of flights : 50
- Flight altitude : 50-70 m
- Flight speed : 20 km/h

Benefits

- High density data
- Good GNSS coverage
- Access to difficult areas
- Rapid deployment
- Ground data under canopy
- Low human risk

www.yellowscan.fr

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