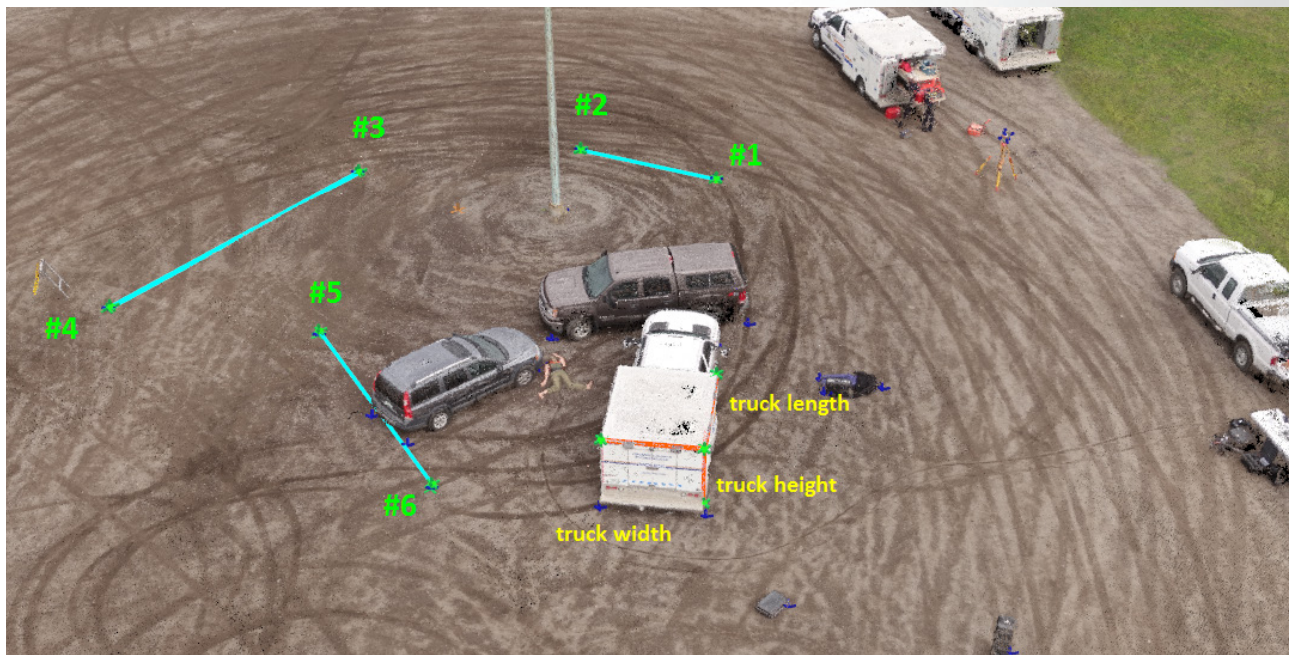




# Showcase | Accident Scene Investigation with Drones

## Emergency Response

<b>PROJECT</b>	The Royal Canadian Mounted Police staged a car accident scene and then mapped it using drones and photogrammetry, in order to develop a protocol for accident/crime scene analysis
<b>KEY BENEFITS</b>	<ul style="list-style-type: none"> <li>• High-accuracy measurements, precise to 1 cm</li> <li>• Fast response time with efficient data capture</li> <li>• Easy-to-use without photogrammetric knowledge / Views and details from any angle</li> <li>• Scene documented with both images and reconstructed model</li> </ul>



Accurate measurements on the 3D point cloud

## Data Acquisition

<b>HARDWARE &amp; FLIGHTPLAN</b>	Draganfly Draganflyer X4-ES drone with SONY QX-100 camera Aeryon Labs Aeryon Scout drone with Photo3S camera Grid flight plan with high overlap and circular flights to obtain oblique images for close-up view
<b>TIME ON SITE</b>	Around 15 minutes
<b>DATASET</b>	Draganflyer: 212 images at 0.9 cm GSD Aeryon Scout: 225 images at 0.6 cm GSD

## Project Outcome

### DELIVERABLES

- 3D point cloud for scaled and georeferenced accident scene documentation
- Digital surface model
- Orthomosaic

### PROCESSING TIME

Around 2 hours per data set

### ANALYSIS

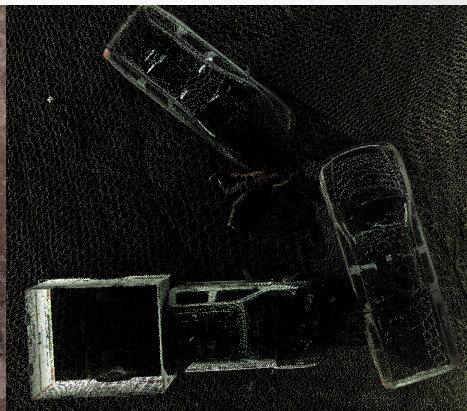
- Reference measurements between the evidence markers were taken by measuring tapes. With the use of GCPs, the 3D densified point cloud result provided around 1 cm of accuracy without missing any details in the reconstructed scene
- The deliverables and quality assessment report produced by the software could potentially be submitted in court as evidence for real case scenarios



Royal Canadian Mounted Police member flying the Draganflyer X4-ES at the accident scene



Photogrammetric point cloud of accident scene



Laser scanned point cloud of accident scene



Close-up picture of staged accident

## Client Reference

SHOWCASE COURTESY OF:



Royal Canadian Mounted Police

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