How Drone Inspection WA Achieved A Resolution of 2cm/Pixel

USE CASE

The Challenge

Companies are looking to automate the inspection workflows of their larger infrastructure assets, such as buildings, silos, hangers etc. Manned inspections of such assets are expensive, dangerous and in most cases incomplete, as due to the asset's complexity, it is seldom possible to achieve all required visual vantage points for a complete inspection. The introduction of drones to the industrial site has the potential to solve these problems, granted that the process can be streamlined and automated.

In a recent project, Drone Inspections WA was contracted to provide a structural survey of the roofs of grain silos in Western Australia's Wheatbelt, to determine if structural deformations have occurred. These structures have conical roofs held up by wooden beams that are prone to sag and/or expand as the heat and gases inside the silo expand or contract. The required output was a CAD file that would be overlaid with the structural drawings to determine if
deformations had occurred.

Drone Harmony's 3D scene-based workflow provides an ultimate tool set for automating drone-based inspections of industrial assets such as buildings, silos, hangars, cranes etc. Drone-based inspections represent a safer and more accurate alternative to traditional manual methods of visual inspection.

Chris of Drone Inspection WA commented:

"We were required to provide a resolution of a minimum of 2cm/pixel. Only an automated flight could achieve this. The sites were challenging to set an automated flight path for, as the roofs were conical, and had many obstacles to navigate around. Drone Harmony was used as it allowed a very specific flight path, of unique parameters to be designed and to have the camera manipulated independently as well by the program for the points of interest as required. Drone Harmony proved itself admirably, and we achieved in automated flight what would have taken enormous risk and complexity in manual flight."

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