

# UAV Photogrammetry and Aerial Mapping

UAV aerial mapping, UAV photogrammetry and UAV (drone) inspection services can be used to deliver various forms of data output including: DTM models, 3D models / as-built, contour surveys, thermal imaging surveys, LIDAR surveys, environmental monitoring, stockpile surveys, UAV pipeline surveys, railway track surveys, UAV pipeline inspection, and waste-water treatment plant surveys.



## THE Applus+ SOLUTION

With some of the most experienced and skilled operators in UAV inspection and aerial photography survey teams in the world, Applus+ pride ourselves on being able to complete highly complex UAV inspection and surveillance tasks and overcome unusual technical challenges. The team of experts from Applus+ in remotely operated aerial vehicles draw on the skills gained from extensive experience with professional-grade equipment, supported by a specialist innovation centre.

Applus+ is well equipped to provide professional-grade aerial LIDAR survey and UAV photogrammetry services using state-of-the-art equipment (UAV and camera technology). We deploy micro-drone multi-rotor UAV systems that allow us to choose the precise direction, height and speed at which to fly, thereby offering a more controlled and accurate UAV aerial survey. This is particularly important when performing intricate and narrow surveys such as railway and pipeline projects, which require very precise flight lines and controlled parameters.

The micro-drone UAV system used in an Applus+ UAV inspection offers a number of other key benefits over fixed-wing UAVs:

- This type of multi-rotor UAV aircraft does not require a large clear area for take-off /landing and the craft is also much more resilient to bad weather

- Loaded with a professional full-frame colour camera, the micro-drone can fly for over 30 minutes at a lower altitude with much less image overlap and therefore more efficient reporting – resulting in a faster, more precise and more efficient survey

Applus+ offers conventional photogrammetry, hyperspectral cameras and multispectral cameras, as well as [laser-scanning services such as LIDAR](#) aerial mapping. We can also provide in-house 3D printing and CAD design services if customers wish to use a custom sensor or camera. In addition, we can offer centimetre-resolution models (even sub-millimetre if required) with in-house data processing.

Applus+ can also provide a cost-effective way of producing frequent and highly repeatable UAV aerial surveys of the same area to produce an ongoing dataset for customers who have this requirement.

The UAV inspection systems deployed by Applus+ can be easily transported anywhere in the world and operate on site with minimal impact and no plant downtime.

## Target customers

These specialist techniques in UAV photogrammetry and UAV aerial mapping can be put to use in a wide variety of contexts in a range of industries.