

What Surveyors Value Most about Their Geodata Acquisition Method



There are numerous software solutions available on the market for the photogrammetric processing of digital images and to generate 3D spatial data. Geoprofessionals can use the [photogrammetric software](#) to create orthomosaics, point clouds and models. Some photogrammetric software solutions are suitable for large-format images from [aerial cameras and satellite processing](#), while others are especially developed for small and medium-format digital images acquired by [unmanned aerial vehicles \(UAVs or 'drones'\)](#). The [Pix4D](#) and [Agisoft PhotoScan software](#) solutions are currently out in front, but many geospatial professionals also mentioned [Inpho](#) (Trimble), [ContextCapture](#) (Bentley), [DroneDeploy](#), [Photomod](#) (Racurs), [Correlator3D](#) (SimActive) and [SURE](#) (nFrames) as their software of choice in a recent survey conducted by 'GIM International' among

mapping and surveying professionals.

The professionals were asked what they valued most about their chosen geodata acquisition method, and the answers will undoubtedly be of interest to providers of photogrammetric solutions. At the top of the list of priorities (Figure 2) is high accuracy (more than 65%), followed by spatial resolution/point density (just over 50%) and reliable processing software (33%). Other important aspects are the rapid availability of final products and a well-established workflow.

Factors affecting accuracy in photogrammetry

It is hardly surprising that accuracy is regarded as essential. However, accuracy is affected by several factors. PhotoModeler Technologies (also known as Eos Systems) published a relevant blog titled 'Factors Affecting Accuracy in Photogrammetry' analysing the various aspects of photogrammetric accuracy. According to the blog, high accuracy is related to photo resolution, camera calibration, angles, photo orientation quality, photo redundancy and targets/markings precision.

One particularly important aspect is knowledge of how to gather the best imagery. After all, of the various factors that affect the accuracy, the quality of the input imagery is crucial. Photogrammetric mapping companies are always working on optimising their solutions, but geospatial professionals themselves can also do a lot to improve the results. It may sound obvious, but high-quality inputs lead to high-quality outcomes.

[Read the full report of the outcome of the survey here](#)