

Drone-Aided Evaluation

Access to areas of interest, such as roofs, high walls, chimneys, and towers, may present a major challenge to structural evaluation and forensic engineering. Building on recent advances in small unmanned aircraft, CTLGroup can obtain high-quality imagery, video, and other data from difficult-to-reach areas without the time and expense associated with scaffolding or lift equipment.

CTLGroup's services in structural engineering and forensic engineering include inspection and evaluation of a wide variety of structures and facilities. To obtain video, still imagery, and other data efficiently and safely in complex environments, CTLGroup has established a fleet of small unmanned aircraft systems (sUAS), commonly known as "drones".

sUAS Imagery

sUAS imagery is a new tool in the structural evaluation and forensic engineering toolbox, complementing hands-on inspection of accessible areas by providing additional camera angles, including the all-important "big picture". In addition, sUAS imagery can provide high-quality documentation for areas that are inaccessible or unsafe.

CTLGroup provides sUAS aerial data acquisition as part of the complete engineering investigation package. Typical applications include documentation (stills, video, dimensionally-accurate 3D photogrammetric models) of:

- As-built or current structure condition (e.g., for asset management or due diligence)
- Surveys of rooftop or high-bay mechanical systems
- Accident or collapse scenes, including 3D modeling of debris for accident reconstruction
- Insurance investigations, from single claims to catastrophe response
- Building envelope issues

CTLGroup's sUAS fleet includes aircraft suitable for both outdoor and indoor flight. The latter aircraft are particularly useful for efficient documentation of large industrial buildings such as warehouses or high-bays.

