

DRONE DATA TYPES

When hiring a drone service, the actual flight is just a small component of the final deliverables. Collecting the right type of data provides better insights and ensures the success of your project.

Here are some of the key processes and data types that drones



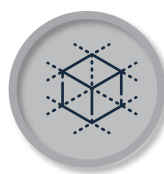
PHOTOGRAMMETRY

Photogrammetry uses powerful processing software to remove distortion and stitch individual images together to create georeferenced mosaics. Once your map is completed, you're able to view different layers, such as the orthomosaic, elevation, surface, and terrain layer.

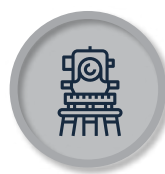
TYPICAL USES:



Aerial-based
Site Surveys



3D
Modeling



Topographic
Mapping



Progress Moni-
toring

THERMOGRAPHY

Thermography uses an infrared camera to detect heat patterns on surfaces, and specialized software can assign those patterns colors to detect and analyze issues not visible in standard RGB images.

TYPICAL USES:



Roof Inspections



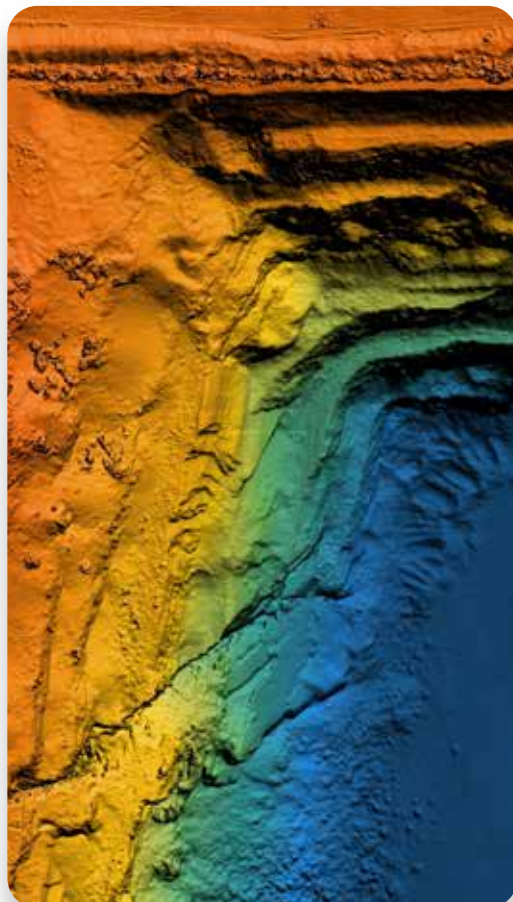
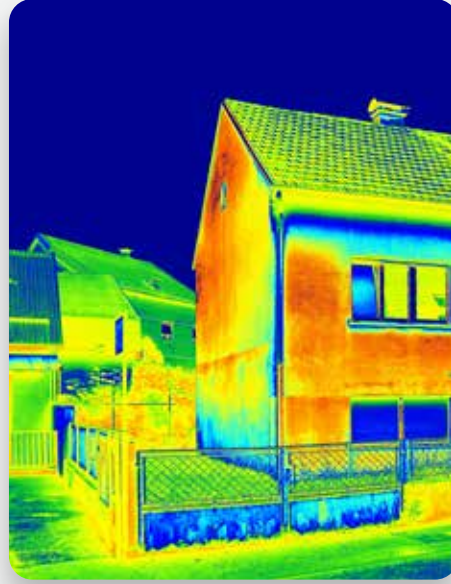
Detect Moisture
Infiltration



Heat and/or Cold
Loss Analysis



Building
Envelope
Inspections



LiDAR

LiDAR stands for Light Detection and Ranging. It uses ultraviolet, near-infrared light to image objects based on echoed signals, requiring no external light for effective mapping.

TYPICAL USES:



Topographical
Mapping Under
Dense Vegetation
Canopies



Agriculture
and Forest
Inventory



Terrain Modeling



Building
Information
Modeling (BIM)



High-Resolution
Point Clouds

POINT CLOUD AND 3D MODELING

A point cloud is a 3D visualization model comprised of thousands (or even millions) of georeferenced points. A point cloud is the raw data output, while the final deliverable is an interactive 3D model.

TYPICAL USES:



Observe an Object's
Depth, Elevation,
Geometry, and Location
in Space



Design-Built
to As-Built
Comparisons



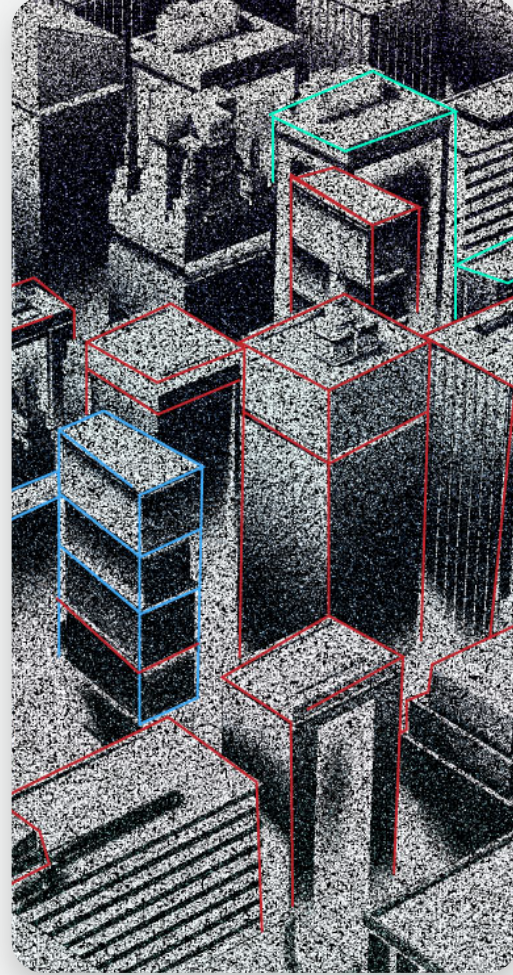
Building
Information
Modeling (BIM)



Contour
Validation



Construction UAV Site
Survey and Project
Monitoring



IMAGING

Through skillful application of resolution, lens focal points, aspect ratios and more, standard RGB images can deliver high-quality results that are easy to annotate and collaborate.

TYPICAL USES:



Inspections



Project
Management



Marketing

VIDEO

Drones provide video cameras from a vantage point formerly reserved for expensive helicopter flights, enabling high-resolution, close-up inspection work using multi-megapixel cameras and sensors.

TYPICAL USES:



Progress Analyt-
ics



Remotely Stream
Project
Inspections



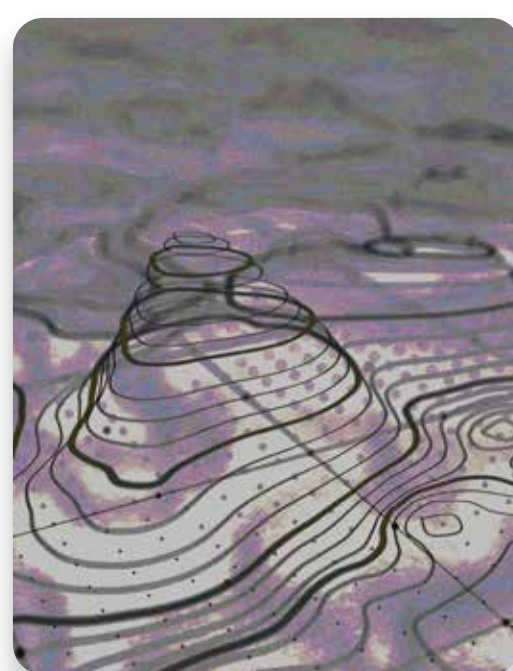
Cinematography



Safety Audits



Time-Motion
Studies



CONTOURING

By gathering x/y/z information from georeferenced image data, it's possible to perform triangulation. This is used to create topographical maps, volumetrics, and digital surface models (DSM). These methods measure everything above the ground, including objects. It can appear like a 3D model, as well as a digital terrain model (DTM), which can remove elements above the ground.

TYPICAL USES:



Stockpile
Volumetrics



Surface Grading



Earthwork
Monitoring



Cut and Fill
Measurements