



C&G SURVEY TECHNICAL SERVICES

**COMPANY
PROFILE**

2021



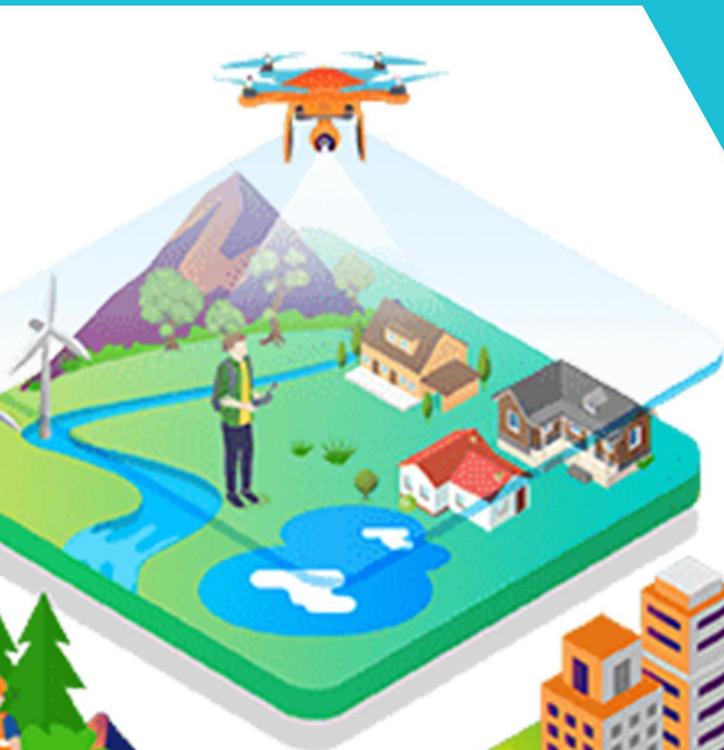
SURVEY AND ENGINEERING CONSULTANCY

<http://candgsurvey.com/>

Introduction



Company Profile and Company Experience C&G SURVEY TECHNICAL SERVICES



1, DIGITAL AERIAL PHOTOGRAPHY

2. AERIAL AND FIELD SURVEYING

3. PHOTOGRAMMETRY

4. LAND CADASTRE

5. GIS



Company



“ Company Profile and Company Experience C&G SURVEY TECHNICAL SERVICES is one of India’s leading consulting companies in the field of GIS, land surveying,photogrammetric and land cadastre with its head-office in Delhi/India.

Founded in 2014 sole owner of GUNJAN CHOUDHARY , this period C&G SURVEY TECHNICAL SERVICES has been playing a major part in a great number of projects in India.

C&G SURVEY TECHNICAL SERVICES employs a staff of about Twenty experts covering the fields of GIS, property management, geodesy, photogrammetry, digital aerial photo flights, digital mapping, land cadastre, project design, software development, geomarketing and training.. ”

About



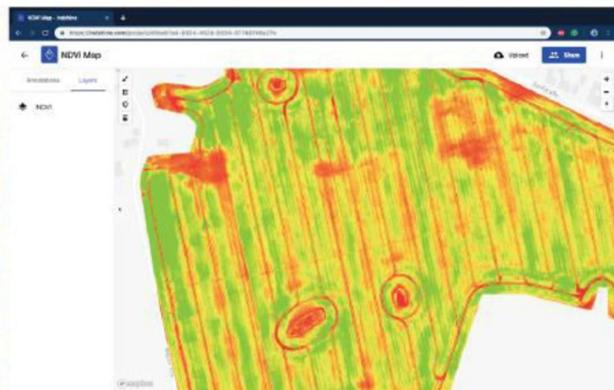
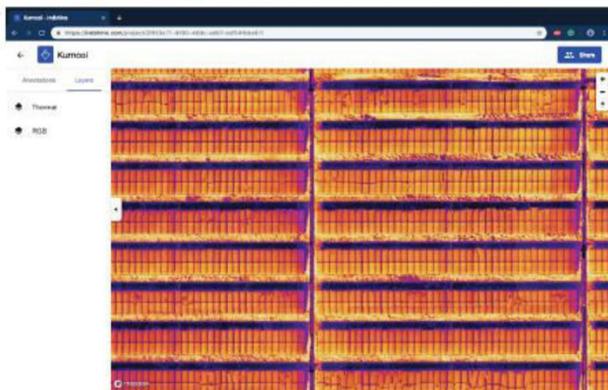
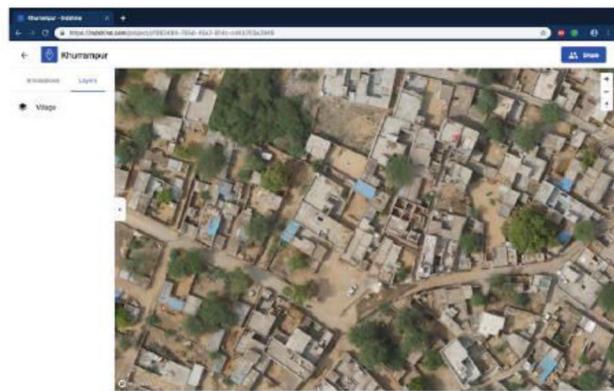
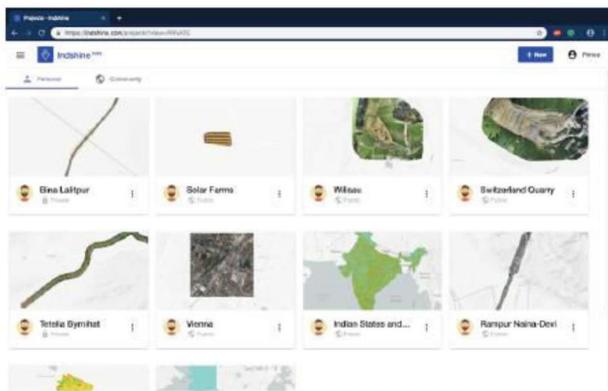
Background

Drones are emerging as a powerful tool across various industries due to its ability to address diverse applications including Topography Surveying, Area Mapping, Thermal Inspection, Construction Progress Monitoring, Infrastructure Asset Management etc. The process is simple. Drones (along with GPS and camera mounted on it) are used to capture images of any area, and those images are processed to create 2D and 3D maps. These maps can be used to gain useful insights and thus, can be used in project planning and management. There's a catch though. These maps are not easy to handle, and hence, used by engineers and professionals only.

PWC is estimating a potential market of \$127 Billion worldwide by 2022 in drone industry. Indshine is striving to make drone maps useful for everyone.

OUR SOLUTION

We Providing an online software to visualize 2D and 3D drone maps. We enable professionals & organisations to collaborate with each other while working on large-scale drone maps, and make real-time decisions using several analytical tools. We have served various industries like Infrastructure, Solar, Forestry, Mining, and Smart Cities.



What are the problems we are solving?

- 1. Heavy Data size:** Drones generate heavy-size 2D & 3D maps which are of very high-resolution. Due to its heavy size, it is usually shared among the stakeholders through hard drives.
- 2. Critical Analysis:** Analysing and working on drone maps to gain useful insights is a constant struggle for many. For instance, in highways, it is needed to monitor the construction progress using drone maps at regular intervals. In mining, it is needed to estimate the volume of stockpiles using drone maps, to calculate excavation work done. Similarly, in agriculture, multi-band images are captured and different indices are calculated to detect crop diseases (hidden to naked eyes).
- 3. Collaboration:** Since everyone needs to install an individual software to work on drone data, it inhibits collaboration on every front. Often everyone has a different sense of progress because due to the lack of a single point of truth for all the analysis, reports and communication.

How are we solving?

- 1. Provide Context to the Projects:** Add important attributes on the maps such as location and description to provide it a context. Mark issues and add comments to keep everyone informed.
- 2. Rich Mapping Experience:** Provides rich mapping experience by bringing the workspace from the field to the computer. One can use the analytical tools on the fly, compare the progress over time, and generate important reports to make informed decisions.
- 3. Better Collaboration:** Indshine provides a common place for all the stakeholders to visualise drone maps at any time from anywhere. All the analysis, communication and reports on top of the maps itself.





C&G SURVEY TECHNICAL SERVICES capabilities and strength are based on its ability to use latest technology most efficiently, such as:

- **GIS - Geographic Information Systems**

UAV, Drones, Drone survey, GIS, Drone inspection, Project Monitoring, UAV consulting, UAV mapping, UAV Services, Aerial Mapping, Aerial Survey, Drone Solutions, Roads & Highways Survey, Mining, Volume Estimation, Powerline Inspection, Pipeline, Route Planning, Railways, Drone Videography

- **Land Cadaster development**
- **Digital Aerial Cameras**
- **DGPS – DIFFERENTIAL
Global Navigation Satellite Systems**
- **IMU - Inertial Measurement Units**
- **Laser scanning**
- **Digital Tachymetry and Leveling**
- **GPR Ground Penetration Radar**
- **UAV (Unmanned aircraft vehicles)**



1.1 C&G SURVEY TECHNICAL SERVICES 's philosophy of work C&G SURVEY TECHNICAL SERVICES 's strength and efficiency is based on the capacity to give the respective customer qualified advice and assistance in the Consultant's wide range of services offered and to have the ability to transfer know-how and expertise in a logical and understandable manner.

C&G SURVEY TECHNICAL SERVICES is able to carry out any geoinformation, consulting and surveying assignment covering all project phases:

- Assistance for decision-making: preliminary studies, feasibility studies, expert opinions, project assessment,
- Project preparation: planning, pre-design services, organizational studies,
- Project management: management and administration, planning methods,
- Design: basic and detailed designs, specifications, tenders,
- Implementation: procurement and installation of equipment, supervision of work, site co-ordination,
- Operation: execution, technical assistance, training
- Evaluation: ex ante, ongoing, ex post.

Whether limited to some specific activities, or extended to overall project execution,

C&G SURVEY TECHNICAL SERVICES assignments are oriented according to the guidelines as follows:

- Designing of the project has to follow the client specific needs,
- Implementation of a global system approach,
- close working relationship with the client's management and project's team,
- Effective transfer of know-how and technology



Due to C&G SURVEY TECHNICAL SERVICES 's wide range of experience and excellent connections with a large number of public and private partners in India, we are in a position to coordinate and implement any short or long term assignment.

1.2 C&G SURVEY TECHNICAL SERVICES 's ability of backstopping on-site operations Due to the company's organization and its excellent financial situation, C&G SURVEY TECHNICAL SERVICES is in a position to provide on-site operations with effective backstopping:

1.3 Equipment The surveying division of C&G SURVEY TECHNICAL SERVICES uses Precise Differential Global Positioning System – Trimble, FOIF ,Topcon Leica GPS receivers and GPS Survey software for its surveying work as well as the latest Total Stations with robotic mode, data registration and adequate software together with fully automatic digital leveling instruments, terrestrial laser scanner .

The photogrammetric and remote sensing division uses the most modern digital aerial camera Ultra CamXp with a gyro stabilized mount SM2000B and GSM 3000 well installed in the photo-airplanes Piper Aztek and Cessna 340. Photogrammetric, visualization and terrestrial surveying software comprises:

- Flight-management system: Trackair POS Track,
- IMU GPS processing: Applanix PosPac 7.0,
- Imageprocessing Ultra Map 3.2.4
- Aerial Triangulation: Inpho Match AT 5.6,
- Orthophoto processing: Inpho Orthomaster 5.6
- DTM processing: DTMaster 5.6, Match T 5.6, Scop 3.0
- Digital stereo plotting: Summit Evolution 3.1.
- 3D Computervision Geoverse / Euclideon
- Solidscan / Euclideon
- Unlimited Ortho



- Unlimited Aerial for 3D city-modelling The GIS, mapping and computer division of C&G SURVEY TECHNICAL SERVICES uses various AutoCADstations and Geographic Information System installations based on MapInfo, ESRI, and the latest versions of Firewalls,Windows, Email, Fax- and Internet connections.

1.4 Summary

CC&G SURVEY TECHNICAL SERVICES has a long-lasting experience covering the complete bandwidth of surveying business including classical technical surveying, landregistration, GPS, GIS, property cadastre, photogrammetric as well as ground penetration radar and aerial photo flights.



Which industries can use it?



Smart city



Highways



Mining



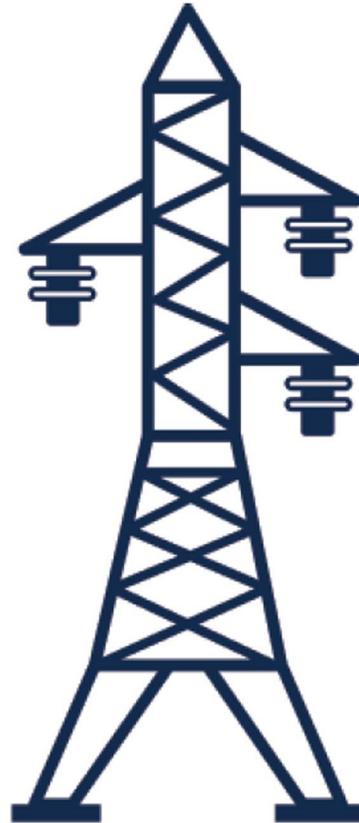
Railways



Forestry

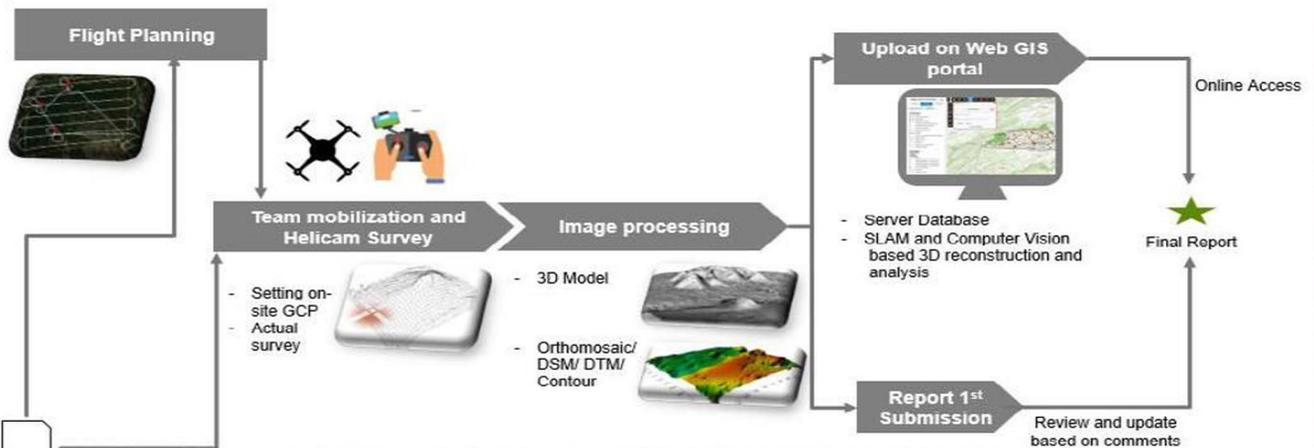


Oil & Gas



Power Transmission

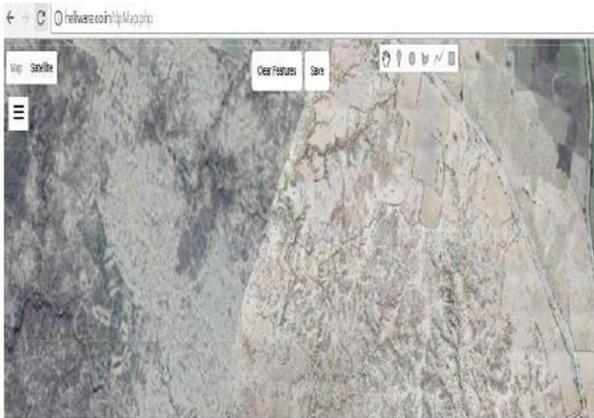
Approach and Methodology





Deliverables - Sample

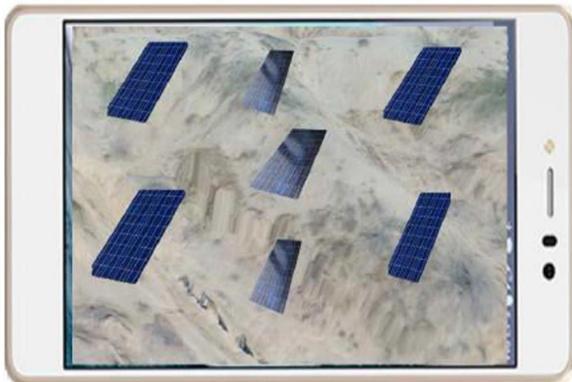
Few sample snapshots of our deliverables report from our previous assignments:



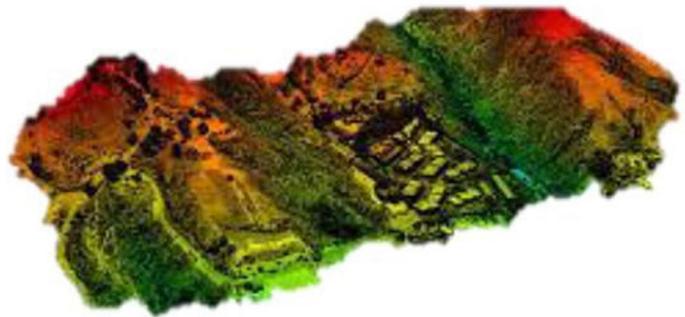
E) Web GIS Portal to visualize and analyze high resolution map /3d Model/Digital Elevation Model .



F) Augmented Reality App to visualize site on phone as a well as in real time.



G) Web and APP Based Plant Installation Progress with timeframe analysis as per client planned solar data site plan.



H) Point Cloud Based High Dense DSM

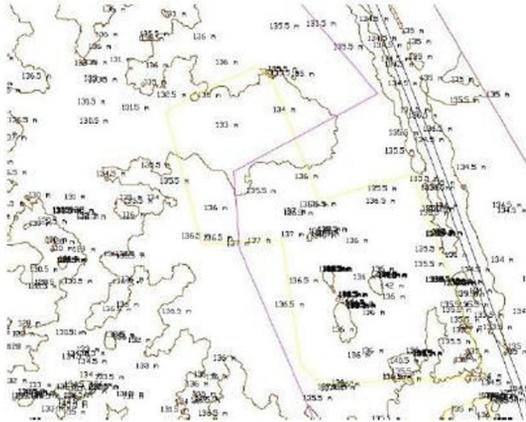


Typical Deliverables*

Deliverable Name	Format	Advantage
D1 Detailed Site Plan showing all the existing features like road, trees along with contour line (with tree and without tree) and elevation point.	Autocad/ Shp/ Dxf as well as client requirement r any GIS/Cad data format	Drawing is completely georeferenced, client can get access of any site geolocation and measurement through the drawing only.
D2 Contour Cross – Section Graph	Excel/AutoCAD	Graph showing slope change along the area.
D3 Site Plan Showing Contour along with water shed/Simulate Water level rise/flooding.	Autocad/ Shp/ Dxf as well as client requirement r any GIS/Cad data format	Drawing showing 3d contour along with existing area where water flow occurs at the time of rainy season also expected area where water body can form.
D4 Cut and fill analysis along with volumetric calculation.	Excel/AutoCAD	Drawing showing where on site area need to cut and where area need to fill with estimated
D5 Web GIS Portal to visualize and analyze high resolution map /3D Model/ Digital Elevation Model/ 360 View & Panorama	Using Heliware portal by giving client a user id and password	Dynamic SLAM Based web portal through which client can analysis, visualize and digitize feature



Few sample snapshots of our deliverables report from our previous assignments:



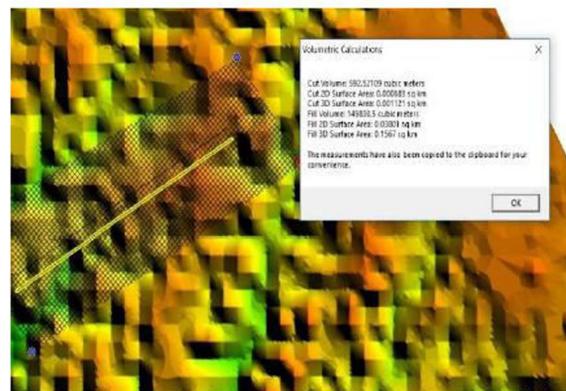
A) Detailed Site Plan showing all the existing features like road, trees along with contour line (with tree and without tree) and elevation point.



B) Contour Cross – Section Graph



C) Site Plan Showing Contour along with water shed/Simulate Water level rise/flooding.



D) Cut and fill analysis along with volumetric calculation



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