



SURVNET (U) LTD

CHCNAV

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Survnet.....Your Geo Data Partner

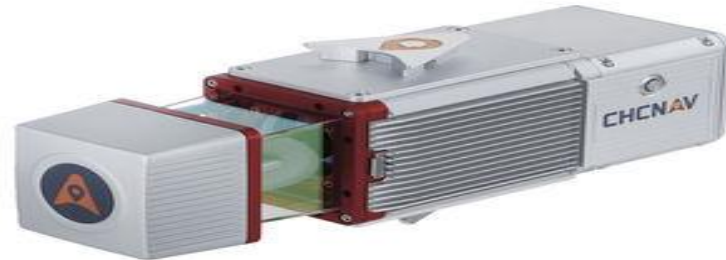
OUR SERVICES



- ❖ CORS Network Services
- ❖ Equipment Sale and Hire
- ❖ LiDAR Surveys
- ❖ Hydrographic Surveys
- ❖ Aerial Surveys
- ❖ Underground Utility mapping
- ❖ Car Tracking services

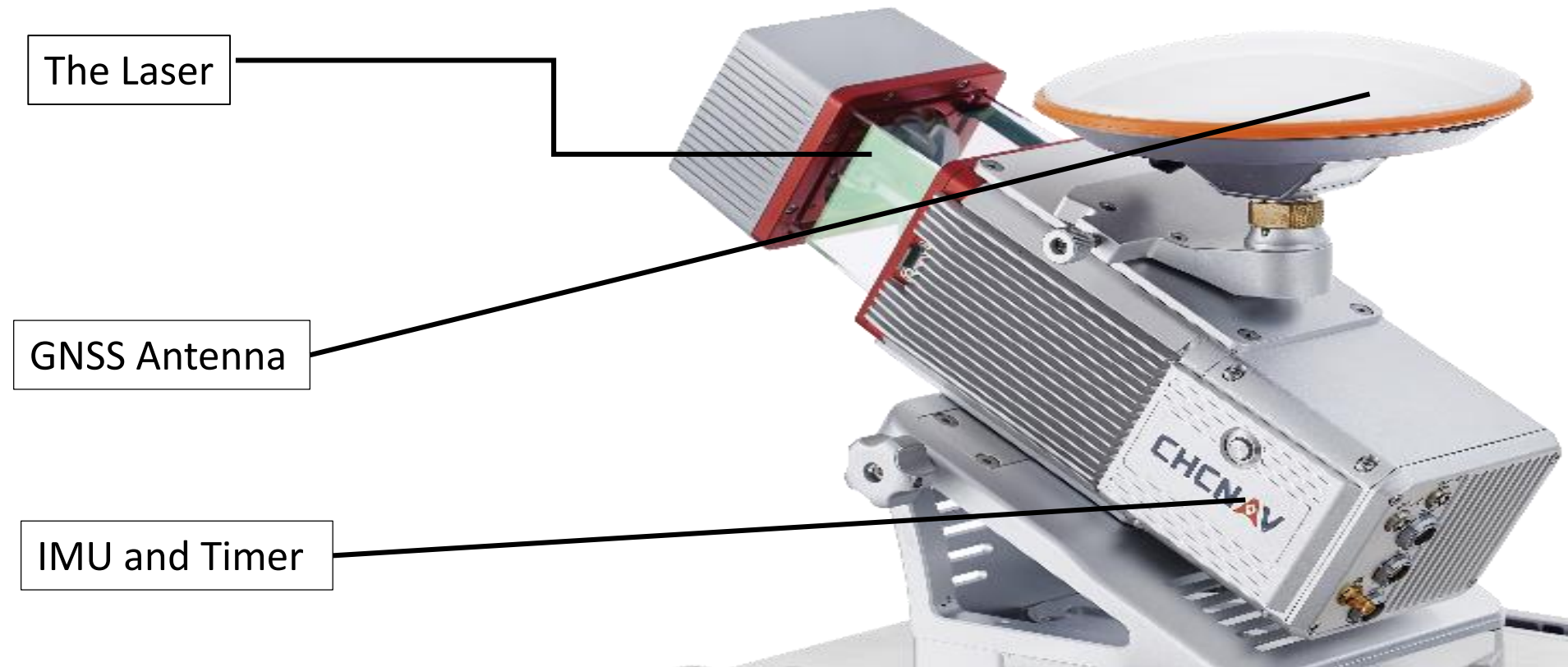
LiDAR Surveys

- LiDAR stands for Light detection and ranging
- LiDAR is a remote sensing technique that uses light in form of a pulsed laser to measure distances to features on the earth's surface.
- There are primarily two types of LiDAR, i.e
 - Topographic LiDAR-This uses near infrared Laser
 - Bathymetric LiDAR-This uses water penetrating green light.

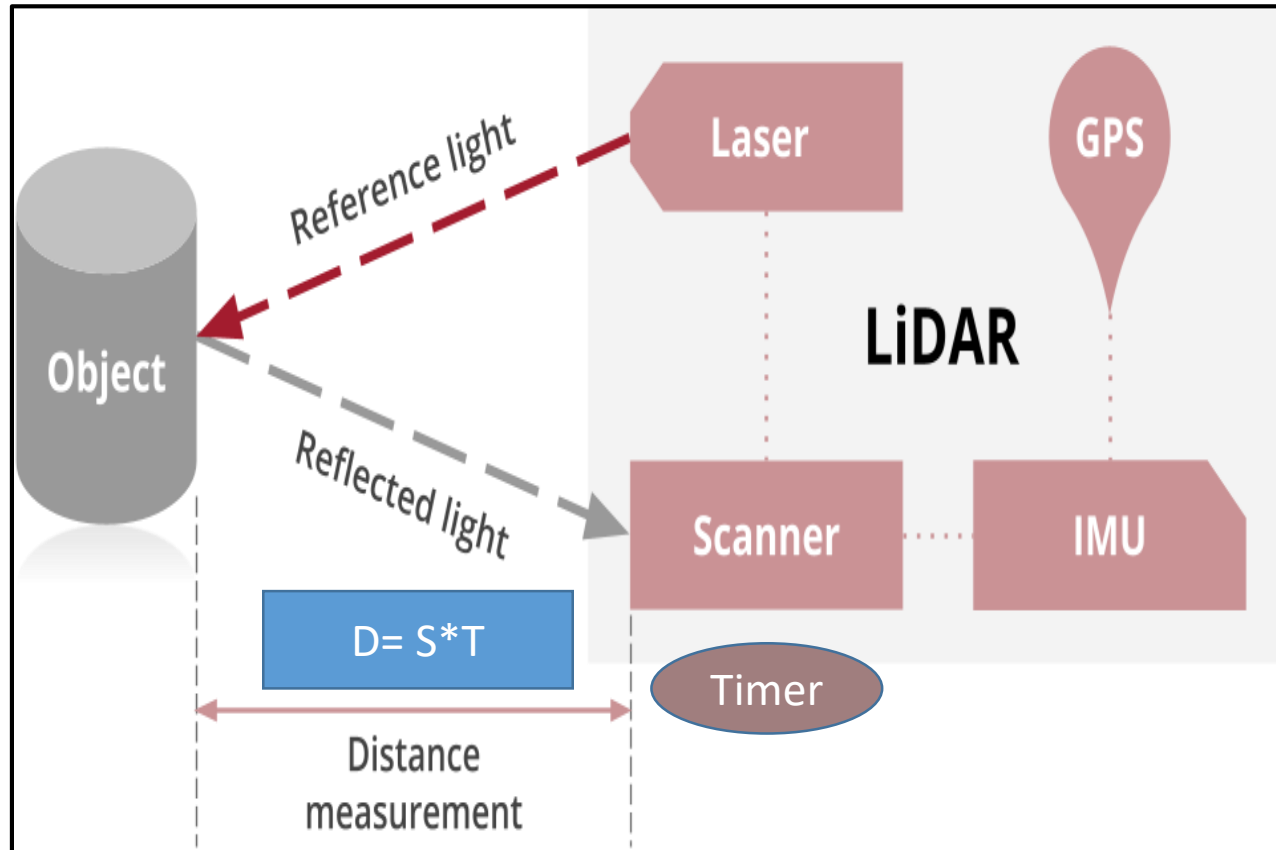


LiDAR Components

The LiDAR equipment has four main parts;



Positioning Principle



- The Laser emits a light pulse
- The pulse is transmitted, and reflected back when it meets an object.
- The signal travel time is measured by the clock on board.
- The IMU measures the orientation of the signal in both the vertical and Horizontal plane.

Raw collected field Lidar Data

- ❖ Each of the components of Lidar collects a specific data set i.e.
 - Laser-----Point cloud in RXP format
 - GNSS.....xyz of the points in txt format
 - Timer.....Time of data capture for each point
 - IMU..... IMU file containing orientation data.

However, during Lidar data collection using Lidar, Static data must always be collected simultaneously over ground control points with in the project area for Georeferencing.

Therefore, this gives rise to another data set i.e. **static data from the control points.**

LiDAR Platforms

Backpack



Car Platform



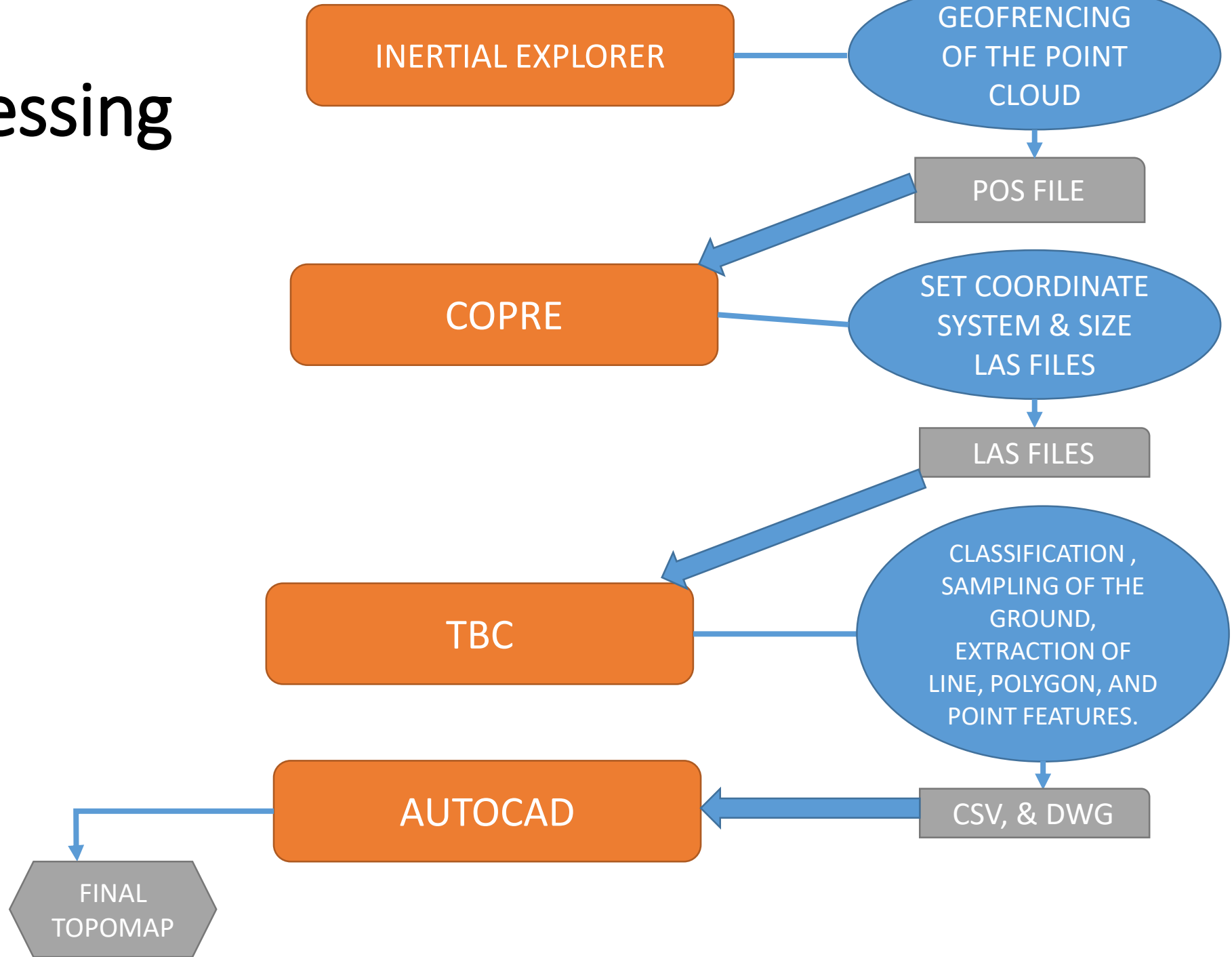
UAV



LiDAR Platforms cont....



Processing



Effect Of Lidar Platform On Lidar Swath Width

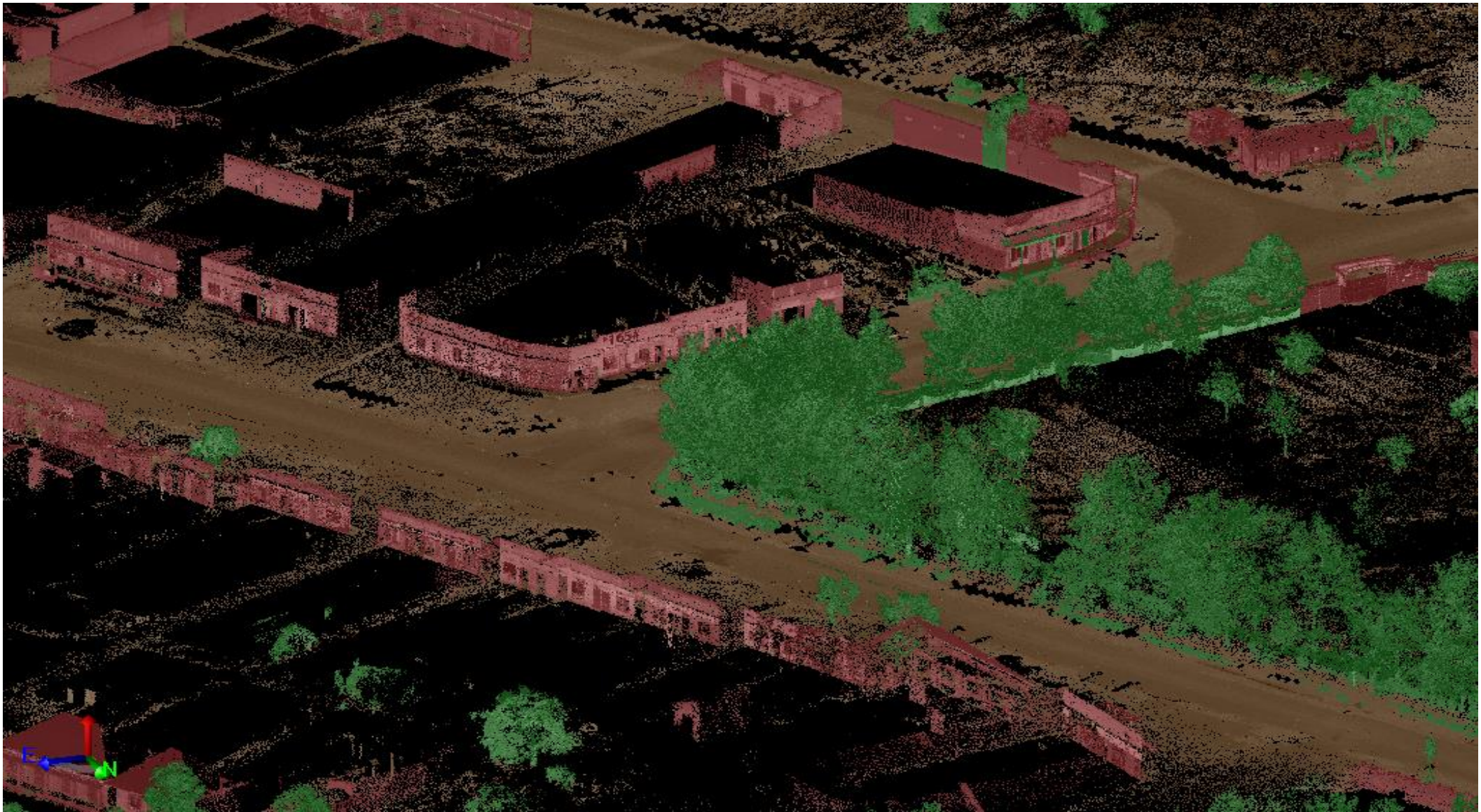
LIDAR PLATFORM	LIDAR SWATH WIDTH (m)
BackPack	50-75
Car Platform	50-150
UAV	200-400

BEFORE CLASSIFICATION



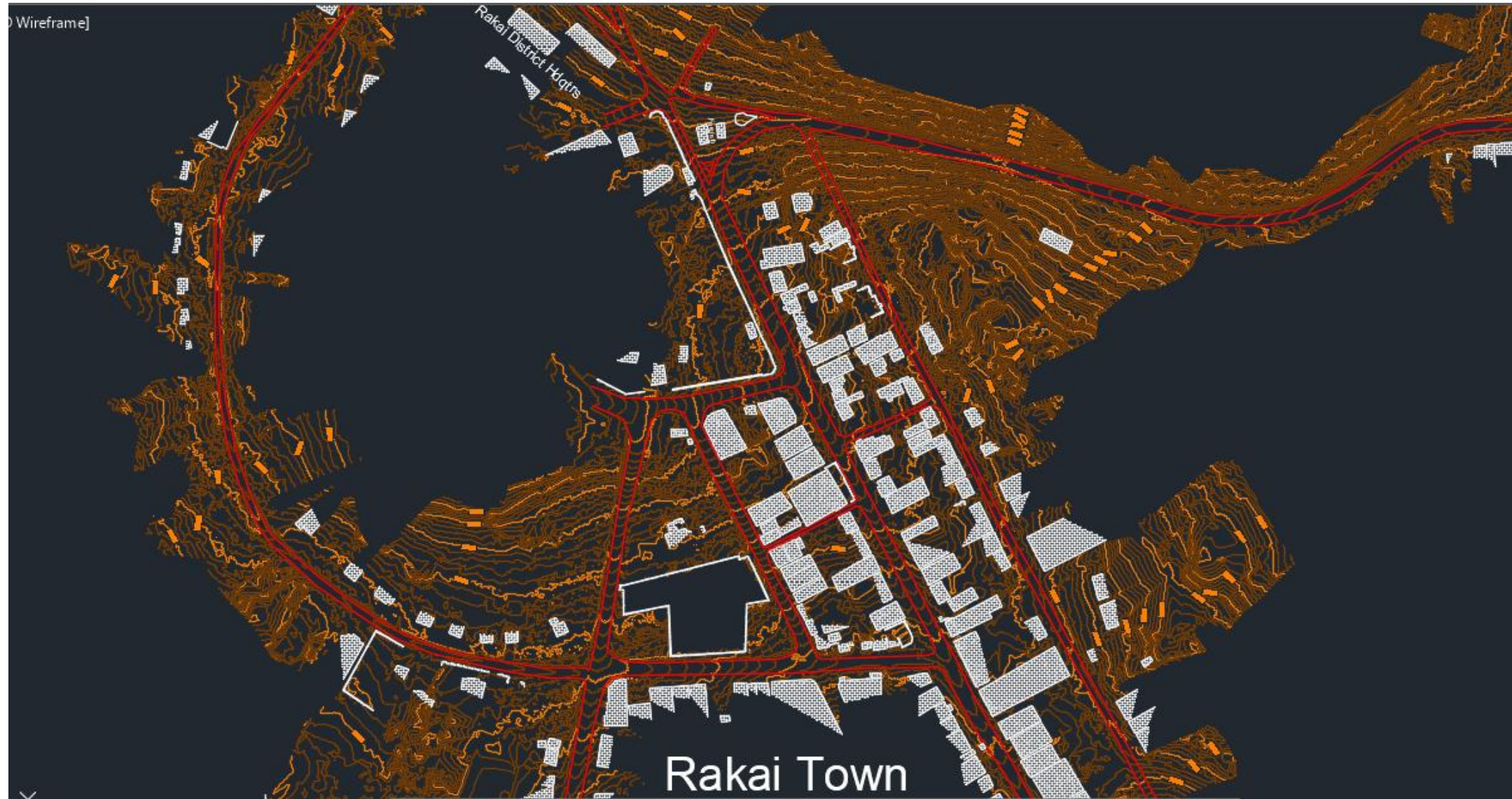
Location: Rakai Town, Uganda

AFTER CLASSIFICATION



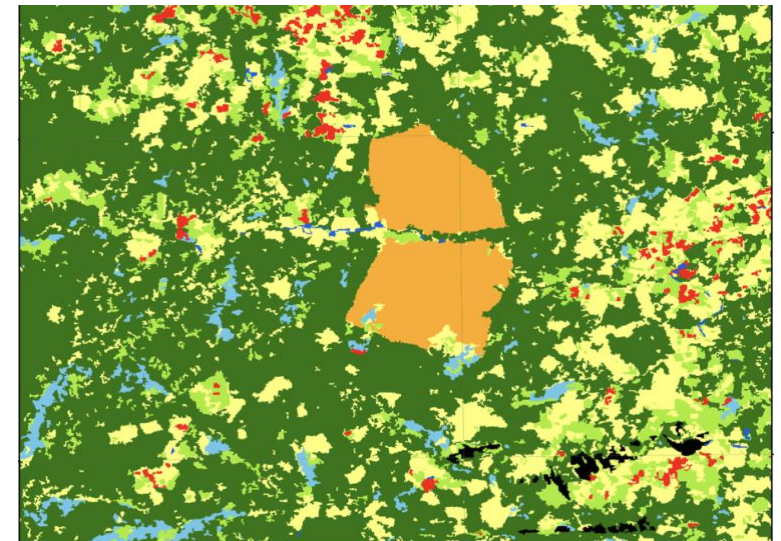
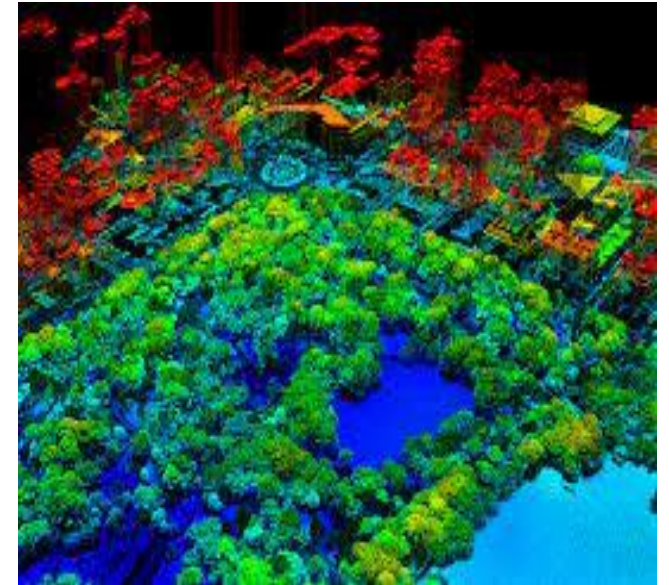
Location: Rakai Town, Uganda

FINAL TOPOGRAPHIC MAP



Applications

- Topographic Mapping
- Powerline inspection
- Forestry studies
- Construction
- Mining applications
- Land use detection
- Physical Planning



LiDAR SURVEYS



- ❖ High Resolution
- ❖ 3D Mapping
- ❖ No Light Requirements
- ❖ Quicker Data Acquisition
- ❖ Low cost of Data acquisition
- ❖ Penetration of canopy and Dense Vegetation

PROJECTS DONE WITH LIDAR



PROJECT	PROJECT EXTENTS	PARTNER	CLIENT
DETAILED TOPOGRAPHIC SURVEY FOR DESIGN OF RAKAI WATER AND SANITATION SUPPLY SYSTEM	150Km	BEC ENGINEERS	MINISTRY OF WATER AND ENVIRONMENT
DETAILED TOPOGRAPHIC SURVEY FOR DESIGN OF A BOUNDARY WALL FENCE AND CONTROL ON KABAAL INDUSTRIAL PARK IN HOIMA	30Km	NEWPLAN	UGANDA INVESTMENT AUTHORITY
DETAILED TOPOGRAPHIC SURVEY FOR DESIGN OF THE PROPOSED KAMPALA JINJA EXPRESS WAY	100Km	NEWPLAN	DAR CONSULTANTS
DETAILED TOPOGRAPHIC SURVEY OF SELECTED INDUSTRIAL PARKS IN UGANDA, I.E (NEBBI, MADIOKOLLO, PADER AND RUKUNGIRI)	2500 ACRES	BHM ENGINEERING GROUP	UGANDA INVESTMENT AUTHORITY
DETAILED TOPOGRAPHIC SURVEY FOR DESIGN OF THE PROPOSED GULU- OPIT- RACKOCKO ROAD.	92Km	ICS	UNRA

Among the many.....

For more information, contact;

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THANK YOU FOR LISTENING!