



inDrones

|||||

# CORPORATE PROFILE

INDRONES SOLUTIONS PRIVATE LIMITED

# ABOUT US

## INDRONES SOLUTIONS PRIVATE LIMITED



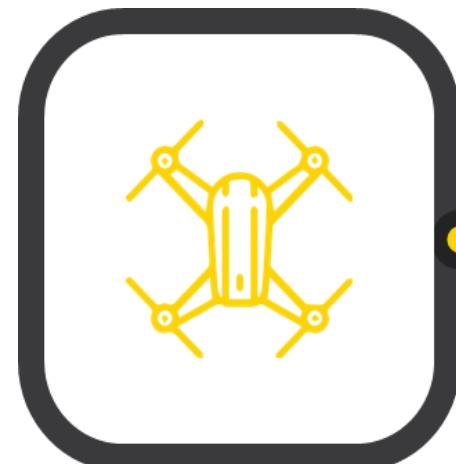
To be an end-to-end high resolution, high accuracy and reliable data solutions company to solve large scale problems



To be a sustainable workplace adding value with technology for better tomorrow



To strive for excellence and sustainable growth creating value for its shareholders.



Drones



Platform



Services

**2015**

Year Founded

**100+**

Total Employees

**165+**

Projects Delivered

**10+**

Industries Served

**58K+**

Square Km Mapped

**19K+**

Linear Km Mapped

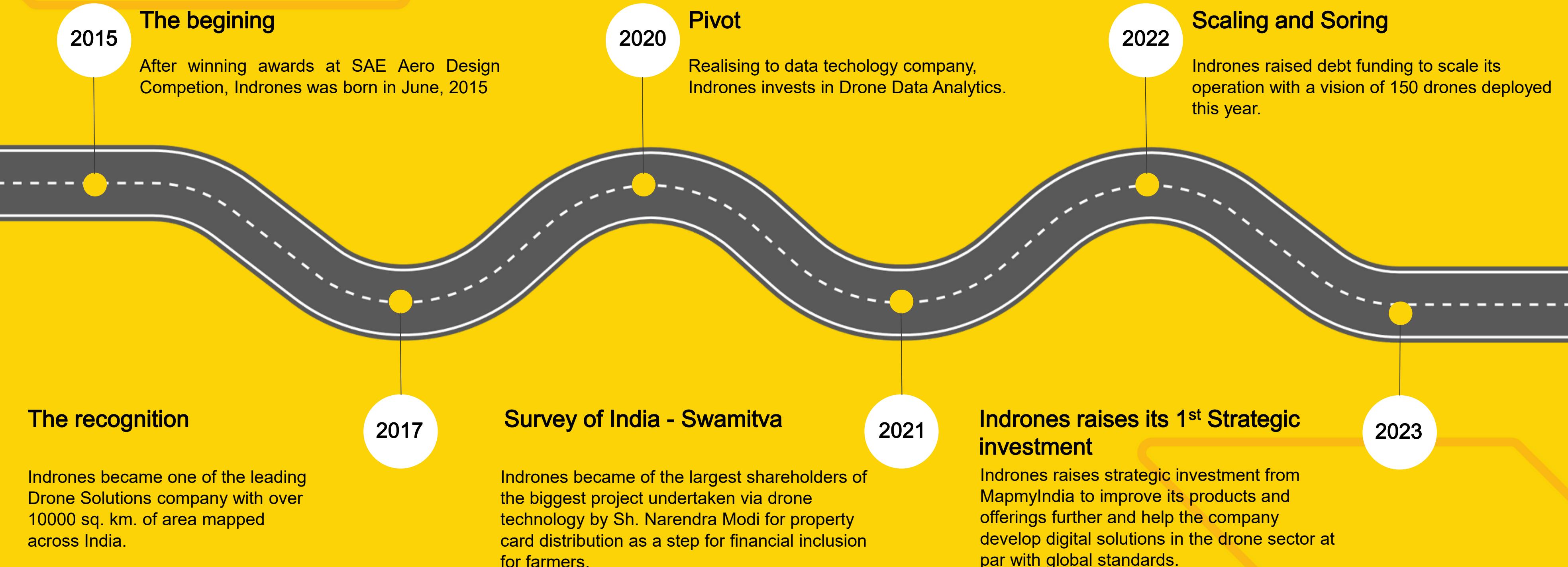
**Mumbai**

HO & Production Facility

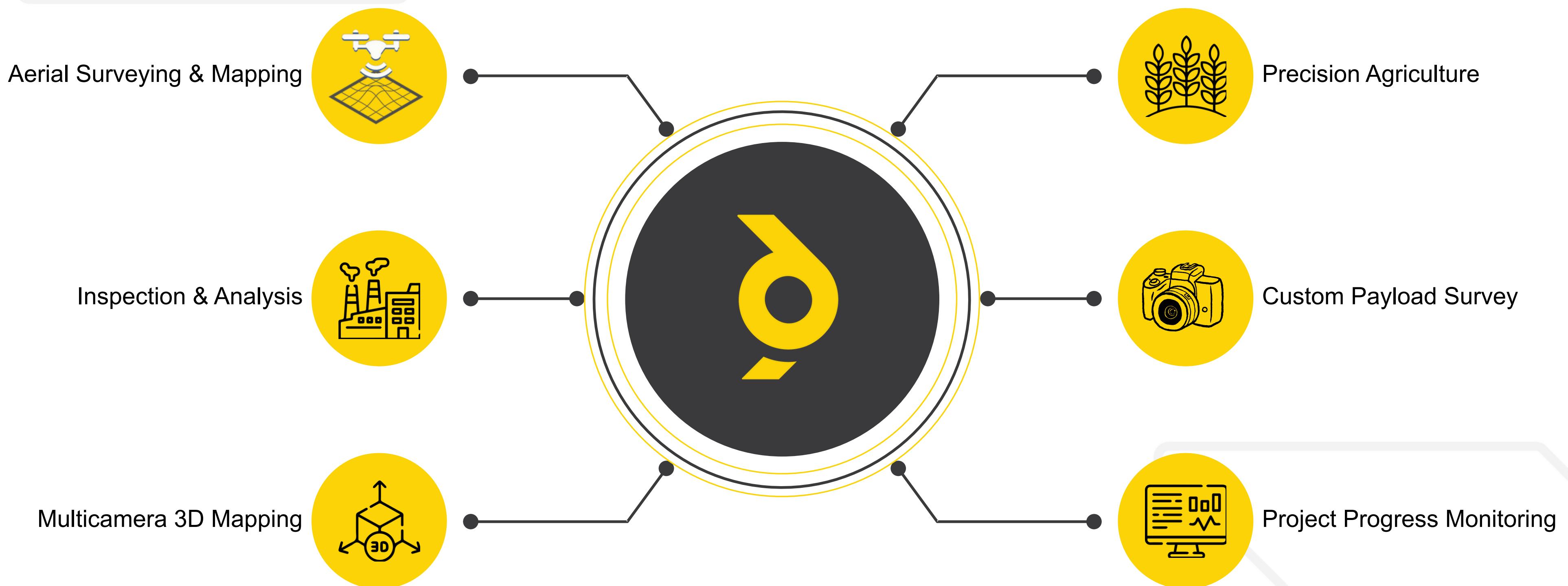
**MapmyIndia™**

Strategic Investor

# OUR JOURNEY

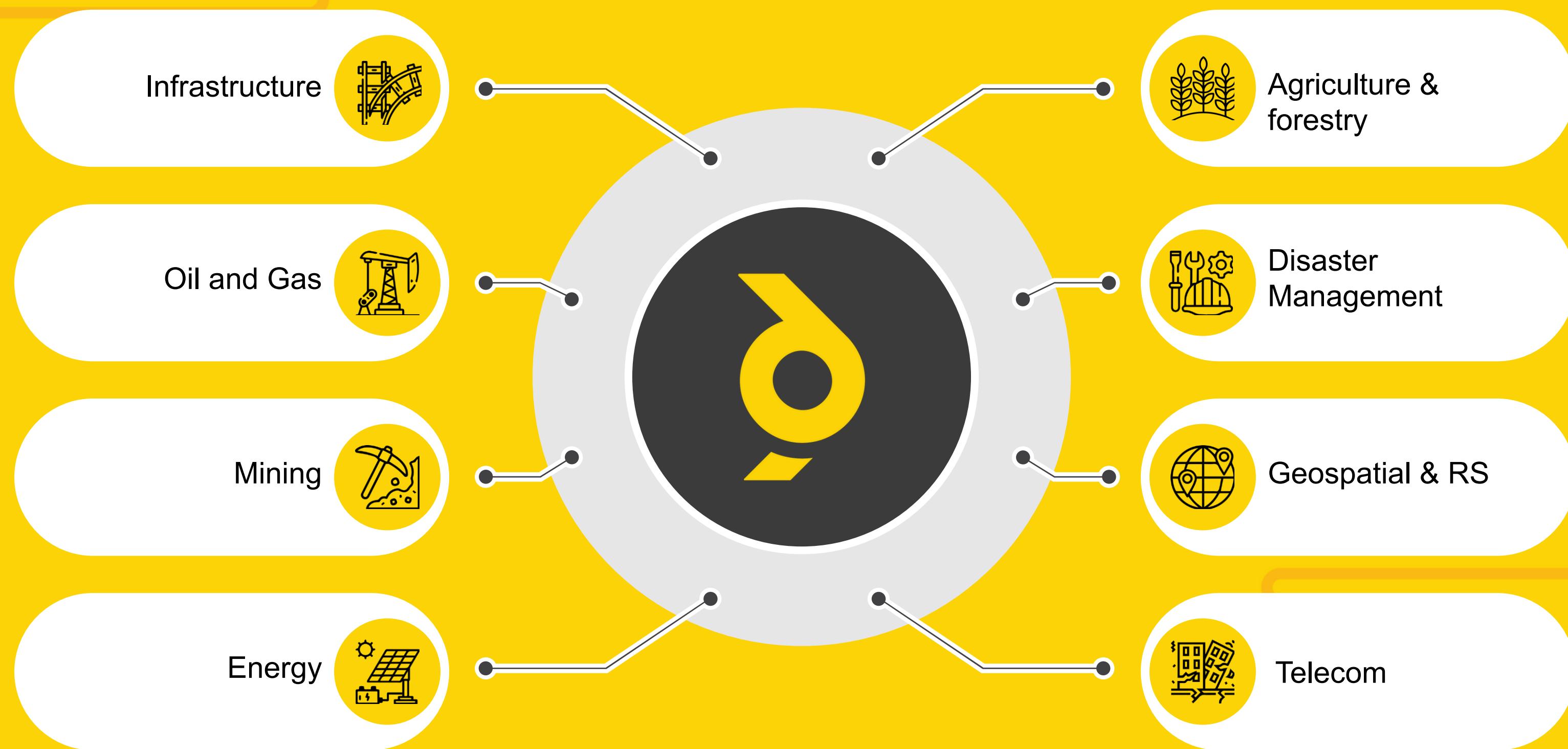


# OUR SERVICES





# INDUSTRIES WE SERVE



# DRONE PRODUCTS



## SIGMA 25 Series

DIMENSIONS	- 500*400*250MM
MATERIAL	- CARBON COMPOSITE
MTOW	- Less than 2.5 KG
PAYOUT	- 0.3 KG
ENDURANCE	- Up to 40 MIN
SPEED	- 10 M/S
RANGE	- Up to 4 KM LOS
CEILING	- 3500 M
LAUNCH	- VTOL
RECOVERY	- VTOL
PAYOUT	- RGB (24MP) RGB (20MP) MULTISPECTRAL THERMAL DAYLIGHT PAYLOAD

## SIGMA 100 Series

DIMENSIONS	- 800*800*350MM
MATERIAL	- CARBON COMPOSITE
MTOW	- 4.8 KG
PAYOUT	- 0.8 KG
ENDURANCE	- Up to 60 MIN
SPEED	- 13 M/S
RANGE	- 4 KM LOS
CEILING	- 3500 M
LAUNCH	- VTOL
RECOVERY	- VTOL
PAYOUT	- RGB (24MP) RGB (20MP) MULTISPECTRAL THERMAL DAYLIGHT & NIGHT PAYLOAD HYPERSPECTRAL LIDAR

## FUJIN VTOL Series

DIMENSIONS	- 2800*1600*350MM
MATERIAL	- CARBON COMPOSITE
MTOW	- 7.8 KG
PAYOUT	- 1.0 KG
ENDURANCE	- Up to 120 MIN
SPEED	- 17 M/S
RANGE	- 20 KM LOS
CEILING	- 4500 M
LAUNCH	- VTOL
RECOVERY	- VTOL
PAYOUT	- RGB (24MP) RGB (20MP) MULTISPECTRAL THERMAL DAYLIGHT & NIGHT PAYLOAD LIDAR

# SOFTWARE PRODUCTS



inCharge



## PROJECT MANAGEMENT PLATFORM

- Fleet Management
- Workflow Management
- Task Management
- Dashboards
- Management Information System
- License & Credit Management
- Second Party App Management
- ACL, IAM & API Management



## LIVE STREAMING PLATFORM

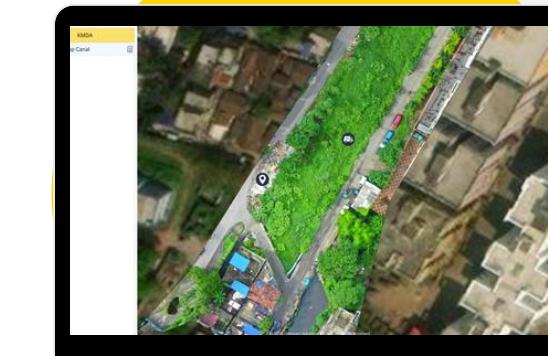
- Create Live streaming
- Map View
- PPE detection
- Custom Object Detection
- Crowd Counting
- Analyze & Log local network quality
- Analyze Video Mode
- Custom Reporting
- User Notifications
- File storage over cloud

inFlight.live



## VIDEO BASED VISUAL DATA ANALYTICS

I Inspect



- Map view
- Terrain Flyby
- Download Snapshots
- Feature overlay on video
- Clip video and download
- Auto Sync multiple videos
- Control video stream quality
- User Notifications
- Control video speed
- Indexing based on Timelines
- Crowd counting
- Create Annotations & Media markers

## GEOSPATIAL DATA VISUALISATION AND ANALYTICS

- Geotagged images
- File Storage over Cloud
- Base Map Selection
- Workflow Management
- Visualize Terrain
- Create Annotations/ Media markers
- Compare ORIs
- Indexing based Timelines
- Terrain Flyby
- Custom reporting

I Inspect

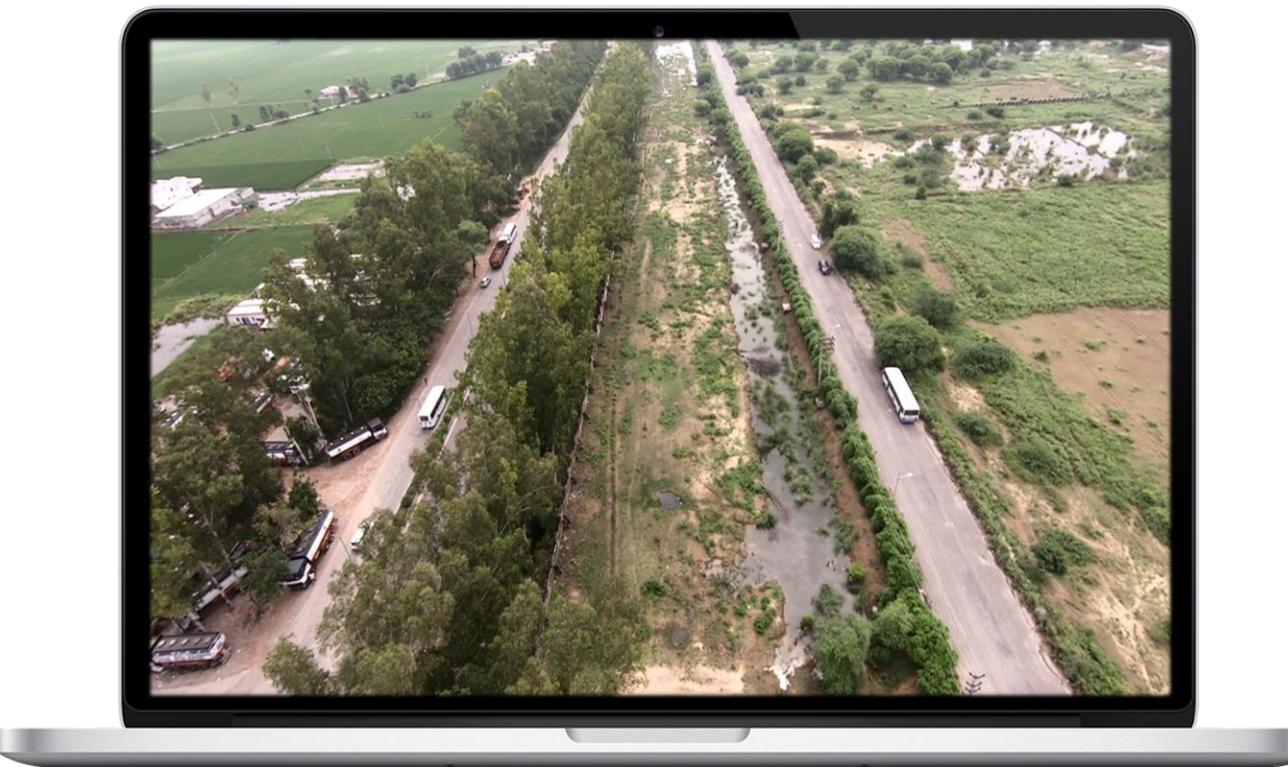


# INSPECT

## CASE STUDY: CHANGE DETECTION



21st July 2021



4th August 2021



Change detection

Detecting Changes Between Two Drone Runs  
Pipeline Section

# DRONE OPERATION

## PROCESS FLOW



**Data Collection**

- Flight planning
- Flying approval
- Drone data collection
- Image quality check

**1<sup>st</sup>**  
**DATA COLLECTION**

**2<sup>nd</sup>**  
**DATA PROCESSING & ANALYSIS**

**Data Processing**

- Surveillance, Inspection & Mapping
- Output generated:
  - Orthomosaic
  - 3D Maps
  - DSM & DTM
  - Contour
  - Live Video Surveillance

**Data Analysis**

- Feature extraction
- Digitization
- Machine learning algorithm implementation

**3<sup>rd</sup>**  
**CLOUD PLATFORM**

**Dashboard**

- Project Management
- User Management
- Task Management
- Live Streaming

**REPORT GENERATION**

- Automated Video stitching
- Annotation Management
- Change detection
- Project Progress Monitoring

**4<sup>th</sup>**  
**PROJECT MANAGEMENT**

# CASE STUDIES LINEAR SURVEY



## OIL & GAS



- AIM:
  - ✓ Pipeline surveillance
  - ✓ Replace traditional on ground manned surveys to Drone surveys
- DELIVERABLES:
  - ✓ Video Surveillance
  - ✓ Chainage Digitization
  - ✓ Feature Annotation
  - ✓ Encroachment Detection



## RAILWAY

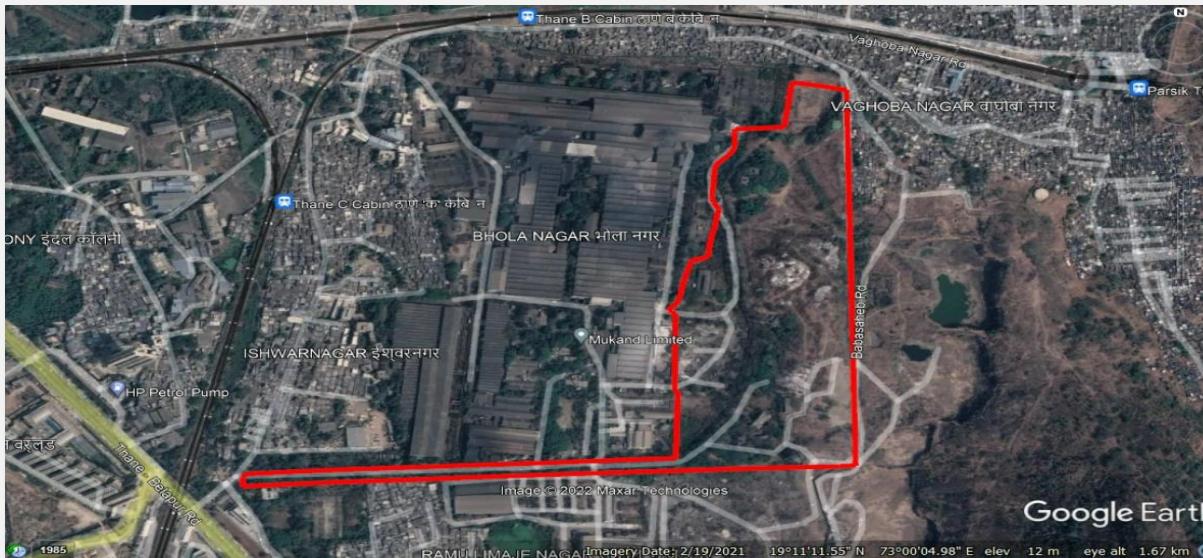


- AIM:
  - ✓ Inspections & Maintenance
  - ✓ Surveying and Mapping
  - ✓ Project Progress Monitoring
  - ✓ Assets Inventory Monitoring, Mapping and Inspection
- DELIVERABLES:
  - ✓ Video Surveillance
  - ✓ Feature Annotation
  - ✓ Encroachment Detection

# CASE STUDIES PROGRESS MONITORING

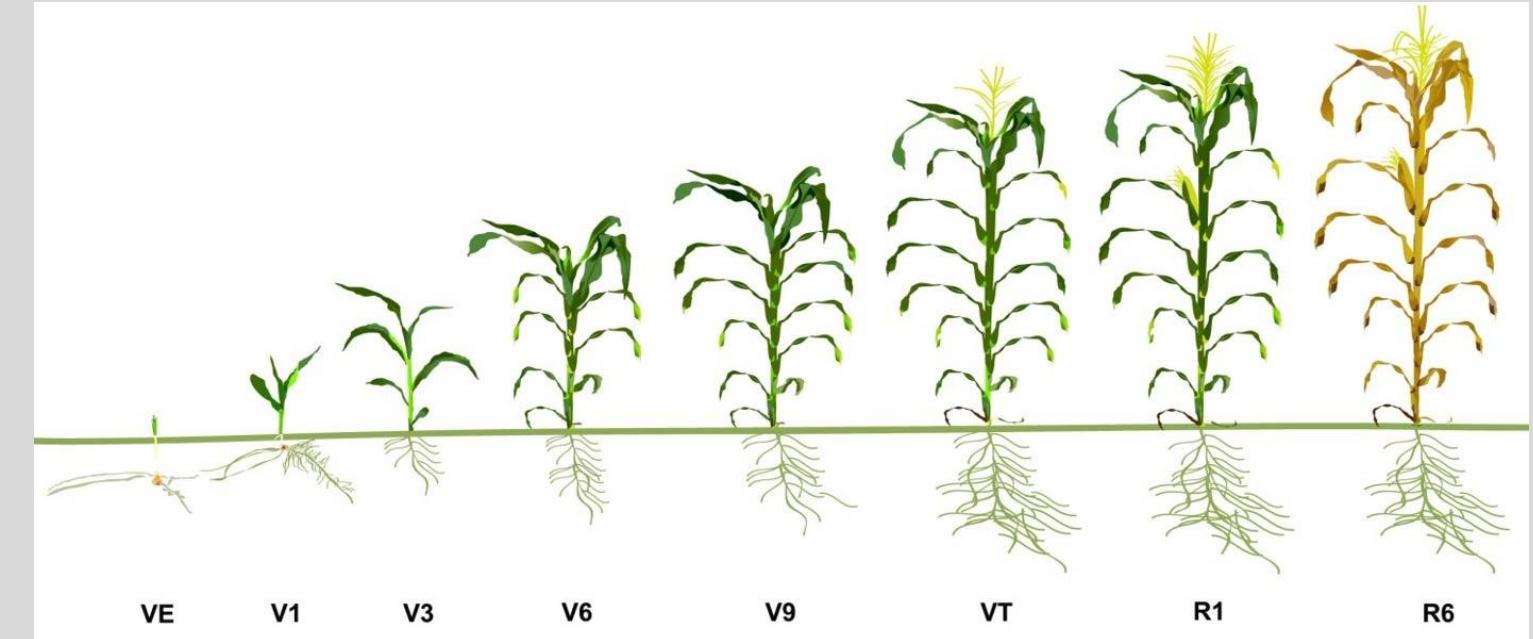


## PROGRESS MONITORING



- AIM:
  - ✓ Boundary Demarcation
  - ✓ Data Analytics, Stockpile assessment, report Generation
- DELIVERABLES:
  - ✓ Orthophoto / DTM / DSM / Contour – 1m Interval
  - ✓ Point cloud / 3D Mesh/ Model
  - ✓ Aerial Video with (annotation & editing)
  - ✓ Topographical Map with Feature Extraction
  - ✓ Project Reports For Volumetric Calculation & Stock Pile Analysis

## MONITORING OF PLANT GROWTH CYCLE



- AIM:
  - ✓ To conduct mapping using multispectral sensors for Crop Health monitoring.
- DELIVERABLES:
  - ✓ Normalized Difference Vegetation Index (NDVI)
  - ✓ Normalized Difference Red-Edge Index (NDRE)
  - ✓ Chlorophyll Index (CI)

# CASE STUDIES **LARGE SCALE MAPPING**



## **LARGE SCALE MAPPING FOR MULTIPLE DISTRICTS**

- AIM:
  - ✓ Large Scale Mapping using drone for Land parcels for multiple districts
- DELIVERABLES:
  - ✓ Data geo-tagged data
  - ✓ Ortho Rectified Image (ORI)
  - ✓ Identification of habitation, roads, water body
  - ✓ Digitization of required features



**Area covered  
10,000+ Sq Km**

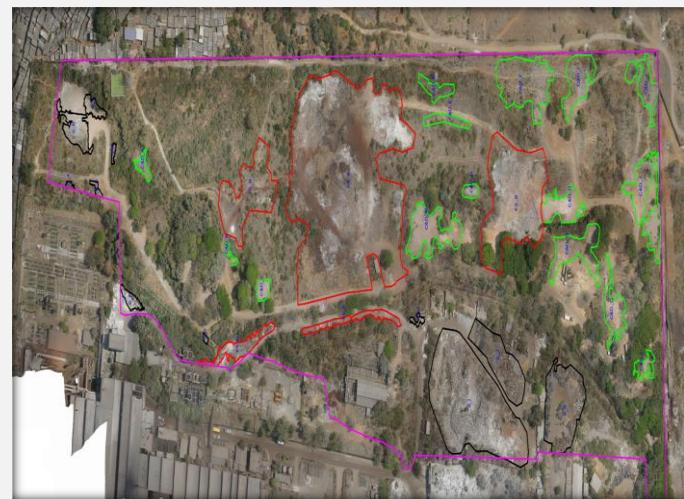
**Location  
Andhra Pradesh  
Karnataka  
Rajasthan  
Uttar Pradesh**

# CASE STUDIES MINING



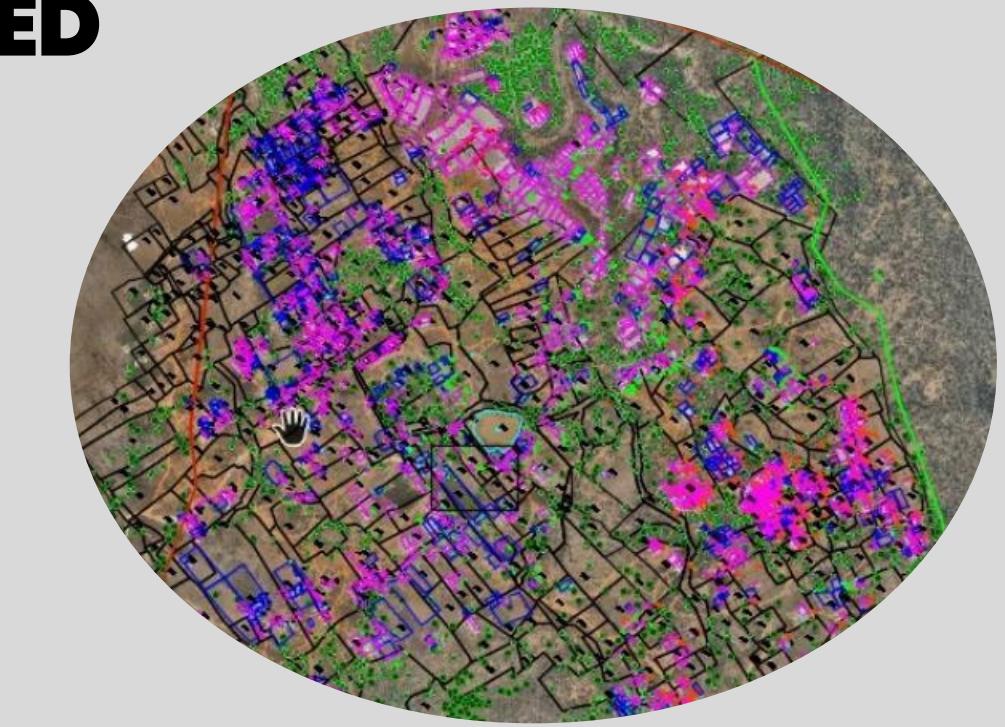
## MINING OPS MONITORING

- AIM:
  - ✓ Aerial Surveying and Mapping
  - ✓ Site Safety Management and Change Detection
  - ✓ Stockpile Assessment and Management
  - ✓ Emergency response
- DELIVERABLES:
  - ✓ Orthomosaic / Orthophoto
  - ✓ DSM / DTM / DEM
  - ✓ Volumetric Calculation & Stock Pile Analysis
  - ✓ Point cloud / 3D Mesh/ Model



## CADASTRAL MAP BASED ASSET ANALYSES

- AIM:
  - ✓ Aerial Surveying and Mapping
  - ✓ Land acquisition
  - ✓ Identify encroachments and initiate actual claims
  - ✓ Identify type of manmade structure with total area and no. of floors survey
- DELIVERABLES:
  - ✓ Ortho mosaic with less than 5cm GSD
  - ✓ DGPS survey
  - ✓ Aerial Videography
  - ✓ Khasra Superimposition



# CASE STUDIES CROWD MONITORING



## DISASTER MANAGEMENT

- AIM:
  - ✓ Monitoring and tracking crowd movement and other resources deployed using drones.
  - ✓ Day & Night Surveillance for Crowd monitoring and tracking & Rescue Operations
- DELIVERABLES:
  - ✓ Real time Video Surveillance
  - ✓ Live Feed Of Drone Data On Multiple Live TVs/Screens and using AI Platform

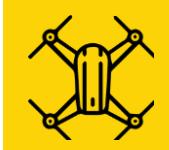


# CLIENT TESTIMONIALS



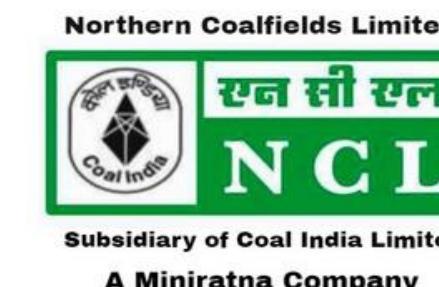
"Indrones is one the most innovative company we have come across with their focus on customer problem solving. SCCL became one the leading Mining companies in India to deploy Drones for topographic surveying, pre-mining surveys and land acquisition strategies for new lease areas"

- GM, Surveys, SCCL



"Indrones has become our internal drone partner with strategic and flexible offerings with great team of experts ready to explore new innovative use of Data collected through drones for our hazard management applications."

- Head, Surveying, Pioneer Foundation Engineers



Satluj Jal Vidyut Nigam Ltd



# THANK YOU



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