

Efficient Enterprises **with Drones**

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Skylark Drones



Where drones are used today?



Mining



Solar



Construction



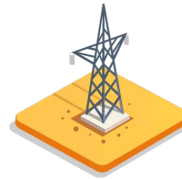
Roads &
Highways



Agriculture



Hydrology



Tower
Inspection

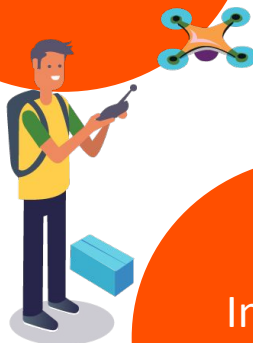


Advantages of Drones

- Automated post-processing reduces errors to a minimum
- Ensures uniform accuracy of the processed data

Highly
Accurate

Scalable



Increased
Productivity








Cost savings in terms of time and manpower

- Only 2 personnel required for the whole process
- 90% time saved compared to conventional methods

- 200 acres of data can be collected in 1 hour with 1 pilot on-field
- 400 acres of data can be processed in a day with 1 data engineer



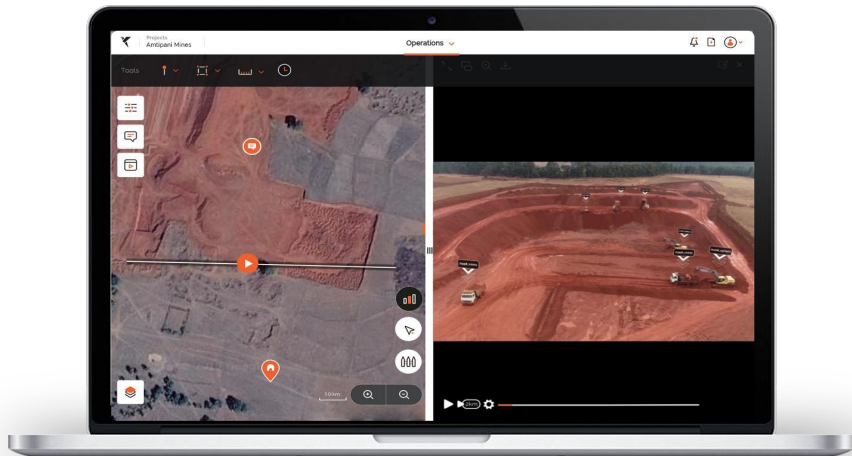
Drone solutions cater to a \$100B cross-industry asset base

Industry	Drone Applications	Indian Asset Base	3 million+ worksites
 Mining	Stockpile Volume Estimation	763,000 hectares	
	Pit Volume Analyses		
	Haul Road Analytics		
	Lease Boundary Security		
 Solar Energy	Rooftop Survey	30,000 megawatts	
	Land Planning & Hydrology		
	Construction Monitoring		
	Thermal Inspection		
 Wind Energy	Turbine Inspection	36,000 megawatts	
 Roadways	Land Surveying	5,600,000 kilometres	
	Construction Monitoring		
 Transmission & Distribution	Tower Land Surveying	390,000 circuit kilometres	
	Asset Health Inspection		
 Telecom	Line of Sight Survey	450,000 towers	
	Asset Health Inspection		
 Agriculture	Crop Yield Estimation	14,200,000 hectares	
	Crop Health Tracking		



Safety

Drones can ensure 100% safety and performance with infrastructure monitoring solutions



Haul Road Analysis

Using drones for haul road analysis helps reduce the need to enter hazardous zones that may be prone to cave-ins, cave-outs, slips and trips.

Hydrology Study

Drone solutions can be used to track water flow in rivers and streams, monitor evaporation and groundwater seepage, and map surface flooding & more



Safety

Importance of Haul roads analysis

- Make timely decisions related to the maintenance of the roads to reduce accidents
- Significant optimisation of fuel costs & save 3% to 5% of fuel consumed
- Reduces truck turnaround time by 10% - 25%
- Reduces Greenhouse Gas emissions

Around 31% of the fatal accidents in mines occur due to transportation

Every 1% road grade increase leads to 15-25% more fuel consumption of dump trucks



Importance of Hydrology Study

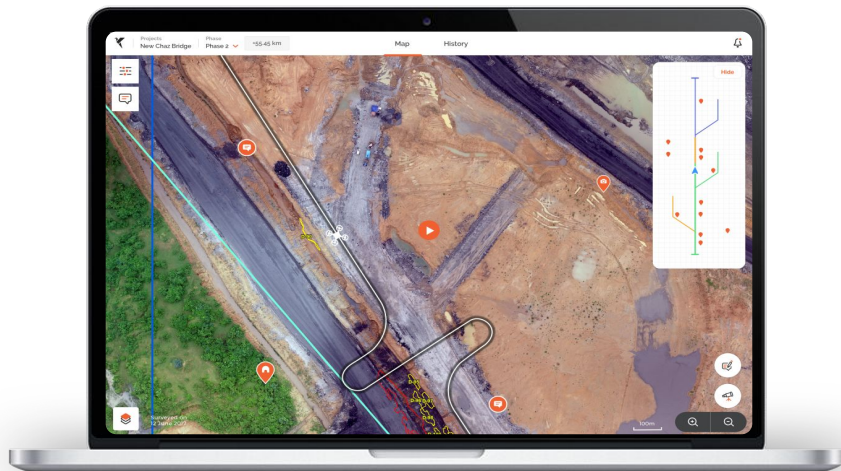
- Helps understand the potential flood risks of any worksite and avoid subsequent additional costs
- Helps understand water flow patterns within the worksite, identify flood prone areas, take mitigation measures and plan storm water drain design
- Helps predict flooding events that can put operations and personnel at risk
- Helps estimate infrastructure project costs more accurately during the pre-bid

12.5 % of workites in India are under severe flood risk



Compliance

Drones can reduce operational risk and ensure compliance with an absolute source of truth



MCDR Compliance

Drone Surveys are mandated by the Indian Bureau of Mines to keep track of mining operations in India

NHAI Drone Survey

National Highway Authorities of India made it compulsory to conduct drone based videography for all highway projects



Compliance

MCDR Drone Survey for Mining Compliance

- All mines in India with annual excavation plans of 1 million tonne or more or having leased area of **50 hectare or more** are required to submit **compulsory drone survey images** to Indian Bureau of Mines every year before **30th June**
- It is mandatory to establish **at least 3 permanent DGPS-based ground control points** (GCPs) at undisturbed locations in the mine. The error of the GCPs between two surveys should be less than 5 cm.

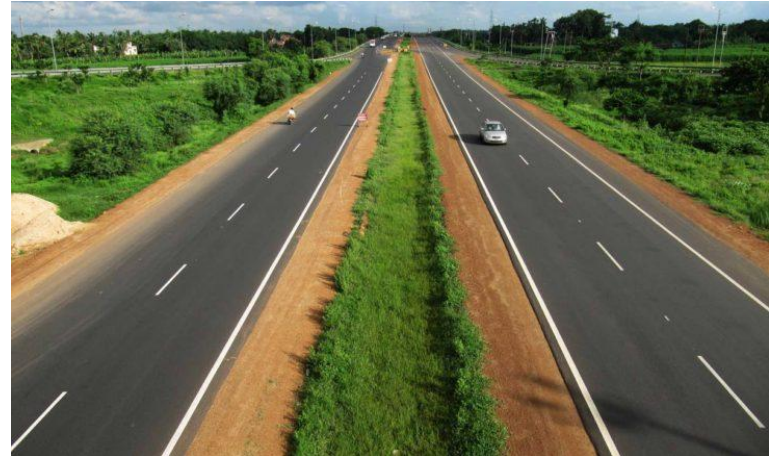




Compliance

NHAI Compulsory Drone Surveys

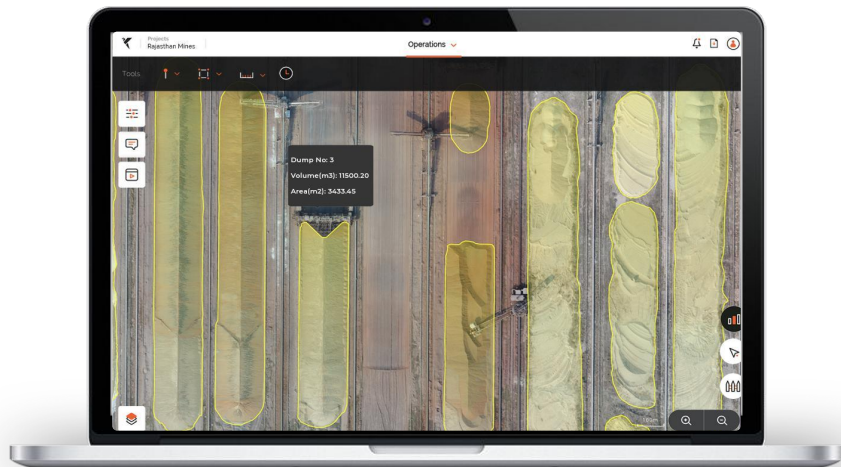
- The National Highways Authority of India (NHAI) mandated the **use of drones** for monthly video recording of **all national highway projects** during their different stages of development, construction, operation and maintenance
- NHAI has mandated that contractors and concessionaires will carry out the **drone video recording** in the presence of the Supervision Consultant, and upload comparative of the current and last month on **NHAI's portal 'Data Lake'**,





Productivity

Use of drones increases overall productivity metrics in worksites like never before



Volume Estimation

Drone Solutions allow automated flight plans enabling faster surveys, capturing high definition images & accurate volume calculations

Inspection

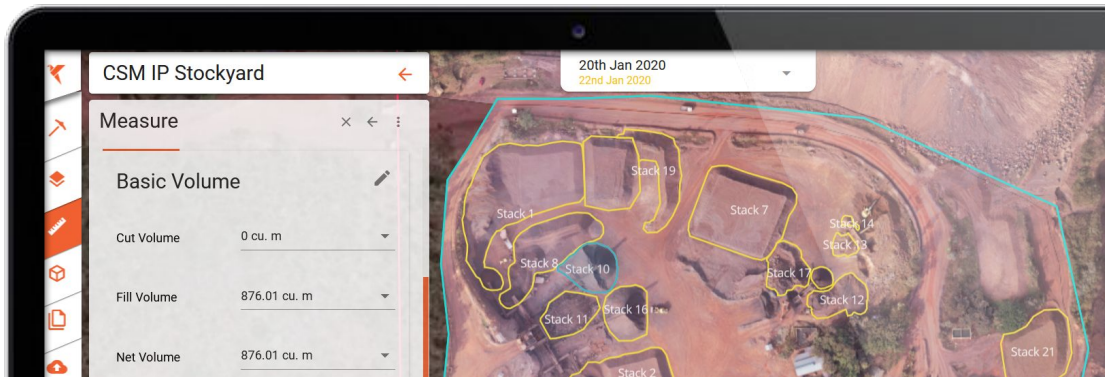
The utilization of drones in inspection services can result in more efficiency in terms of speed, cost & reduction of manual labour



Productivity

Volume Estimation

- Mines have historically made rough assumptions as to the volume of outputs generated, which leads to underreported numbers. Any mistake at the bottom of the funnel leads to resource mismanagement at a macro operational level.
- Mining operations are dynamic entities with constantly changing landscapes. Operations Head need constant data on how the mine is progressing and the changing topography
- Considering Drones' accuracy, speed, and ability to automate the calculations, drone solutions drastically increase productivity and efficiency

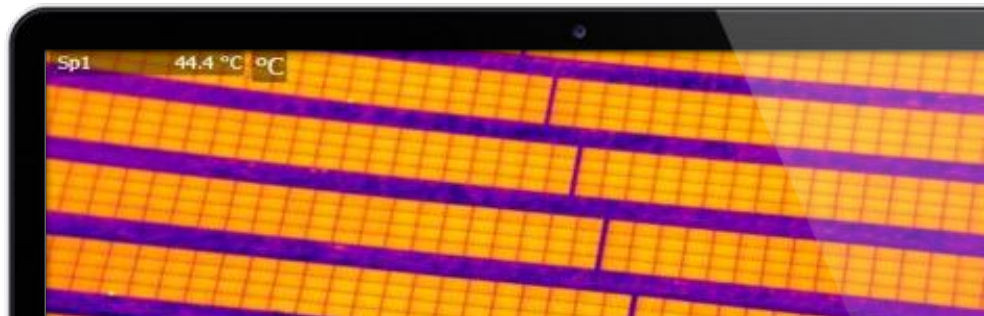




Productivity

Inspection

- Drones reduce data acquisition time and cost by upto 40%
- Detects and delineates hotspots, short circuits and vegetative overgrowth thru AI driven algorithms
- Ensures critical parts of a plant such as inverter rooms, boundaries and other infrastructure are performing with near-real time inspection audits
- Drones not only eliminates safety risks associated with manual inspection but also captures centimeter-level data without any personnel ever climbing transmission towers leading to better productivity for the inspection team



About Skylark Drones

Our mission is to unlock the economic potential of the skies

We are drone software & services company building the core infrastructure to provide work-site intelligence to enable accurate business decision-making using Drone data

Skylark's flagship products DMO (Drone Mission Ops) & Spectra are currently propelling the entire drone ecosystem by empowering 100+ drone service providers, 1000+ pilots and 120+ enterprises including fortune 500 companies in the Mining, Solar, Infrastructure, Construction, Utilities, Agriculture sectors.

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Thank you