



BUSINESS PLAN · INDIA

Mine-Survey and Exploration Services

Drone survey, drilling and exploration

MINING

AISEVAK.IN · BY ABL DIGITAL TECHNOLOGIES

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This document is confidential and prepared for planning purposes. All financial figures are illustrative model assumptions for an Indian MSME context and must be validated against live quotes, local rates and professional advice before any investment or borrowing decision.

1. Executive Summary

This plan sets out a **Mine-Survey & Exploration Services Business** in India — a tech-enabled services business providing **drone/LiDAR surveys, drilling & exploration** to mines, quarries & infrastructure projects. It delivers precise measurement & sub-surface data — volumetrics, stockpile measurement, mine-planning support, DGPS boundary surveys & reserve estimation — on a project/per-survey fee. It combines specialised assets (drones/DGPS/drill-rigs) with technical expertise — an asset-plus-expertise, project-fee-, tech- & utilisation-driven services business.

Mines, quarries & infrastructure projects need accurate, frequent survey data — for statutory mine-plans, volumetric/production measurement, stockpile reconciliation, boundary/lease verification, safety & reserve estimation — and are shifting from manual survey to **drone photogrammetry/LiDAR, DGPS & modern exploration drilling**. A mine-survey/exploration services business is an **asset-plus-expertise services business**: it invests in survey-grade drones/LiDAR/DGPS & (optionally) drill rigs, and sells accurate deliverables on a project/per-survey/per-metre basis. It is tech-, expertise-, utilisation- & project-driven: survey accuracy/turnaround, tech capability, utilisation & client relationships determine success. Revenue = **projects × fee (per-survey/per-metre/retainer)**; economics rest on utilisation, fee realisation, tech/asset cost & expertise — asset-plus-expertise, project-fee-driven.

This is a moderate-capex, tech-enabled services business — funded by promoter equity plus term loan (equipment) & working capital. This plan models a mine-survey/exploration services business requiring **₹2 crore** (₹80 lakh promoter + ₹1.2 crore term loan/WC), targeting **₹3 crore** revenue in Year 1 and **₹7 crore** by Year 3. (*Mine-survey/exploration; projects × fee, tech/expertise/utilisation-driven, asset-plus-expertise — figures illustrative.*)

2. Business Description, Vision & Legal Structure

Concept: A mine-survey & exploration services business - drone/LiDAR survey, DGPS & drilling delivering volumetrics, mine-planning support, boundary surveys & reserve estimation on project fees.

Vision: To bring precision & data to mining - accurate surveys & exploration for safer, better-planned operations.

Mission: Deliver accurate, fast survey & exploration data - drone/LiDAR/DGPS/drilling with expert analysis.

Legal structure options

- **Private Limited / LLP** — recommended for equipment finance, contracts, credentials & scale.
- **Proprietorship/Partnership** — possible for a small practice; credentials attach to individuals.

Regulatory anchor: the business is asset-plus-expertise & compliance-sensitive on the tech side — **drone operations require DGCA compliance** (Drone Rules, remote-pilot certificate, airspace/zones, registration), survey credentials/qualified surveyors (mine-survey plans need qualified persons), GST & contract terms; exploration drilling adds safety/site permissions (client-held). Utilisation, fee realisation, tech capability/accuracy, credentials & client relationships determine success; it is tech-, expertise-, utilisation- & project-driven, asset-plus-expertise.

3. Promoter & Ownership

Led by a promoter with mine-surveying, geospatial/geology or drone-tech expertise. The team includes surveyors/mine-surveyors, drone pilots (DGCA-certified), GIS/data analysts, drilling crew (if drilling), BD & admin. Tech capability/accuracy, credentials, utilisation & relationships are the differentiators. Ownership, equity & any partner are editable inputs.

4. Market Analysis — India

India's mining & infrastructure sectors increasingly demand precise, frequent survey & exploration data — driven by statutory requirements, production reconciliation, safety & the shift to drone/digital survey. Demand is mining-/infrastructure-/compliance-/tech-driven. The market rewards accuracy, turnaround, tech capability, credentials & relationships; it is activity-, tech- & compliance-sensitive.

Demand drivers

- **Statutory mine-plans & surveys.**
- **Volumetric/production & stockpile** reconciliation.
- **Boundary/lease & DGPS** verification.
- **Reserve estimation & exploration.**
- **Drone/digital-survey shift** & infrastructure demand.

Market sizing (illustrative framing)

Layer	Definition	Indicative scale
TAM	Mine-survey/exploration/geospatial in India	Growing
SAM	Regional mines/quarries/projects	Serviceable
SOM (Yr 1-3)	Project & retainer clients	Scaling

Target segments

- Mines & quarries (statutory/production).
- Infrastructure/EPC projects (volumetrics).
- Mining consultants (survey partner).
- Government/PSU & exploration.

5. Competition & Competitive Advantage

Landscape: other survey/drone firms, geospatial companies, exploration/drilling contractors & in-house survey teams. The business competes on accuracy, turnaround, tech capability, credentials, deliverable quality & relationships.

The business's edge

- **Accuracy & deliverable quality.**
- **Tech capability** (drone/LiDAR/DGPS/drilling).
- **Turnaround & frequency.**
- **Credentials** (DGCA/qualified surveyor).
- **Analysis** (volumetrics/planning/reserves).

6. Services & Revenue Model

Service	Model	Basis
Drone/LiDAR volumetric & stockpile survey	Per-survey / retainer	Core / recurring

Mine-plan / topographic survey	Project fee	High-value
DGPS boundary / lease survey	Project fee	Value
Exploration drilling / core	Per-metre / project	Volume/asset
Reserve estimation / GIS analysis	Project / retainer	Analysis value

Revenue is **projects × fee** (per-survey / per-metre / retainer) across drone/LiDAR survey, mine-plan/topo, DGPS boundary, drilling & reserve estimation. Economics = utilisation (survey-days/asset-hours) × fee – (equipment/asset + crew + travel/consumables); utilisation, fee realisation, tech/asset cost & expertise drive it — the decisive service levers (asset-plus-expertise).

7. Go-to-Market — Clients & Utilisation

- **Mine/quarry & project** relationships (recurring surveys).
- **Retainers** (periodic volumetric/production).
- **Mining-consultant & EPC** partnerships.
- **Accuracy/turnaround & credentials.**
- **Tech/analysis** differentiation.

Sales approach

Build tech capability & credentials → win survey/drilling projects → convert to periodic retainers (volumetric/production) → partner with consultants/EPC → grow via accuracy/reputation → add assets/analysts & utilisation. Tech/accuracy, credentials, utilisation & relationships build an asset-plus-expertise services business; retainers add recurring.

8. Operations Plan (services, asset-plus-expertise)

- **Survey assets:** survey-grade drones/LiDAR, DGPS/GNSS, total stations, (optional) drill rigs.
- **Field ops:** survey missions, drone flights (DGCA-compliant), drilling, data capture, utilisation/scheduling.
- **Processing & deliverables:** photogrammetry/point-cloud, GIS, volumetrics, mine-plans, reserve estimation, reports.
- **Credentials & QA:** DGCA/pilot certs, qualified surveyors, accuracy QA/calibration.
- **BD & relationships:** client development, retainers, partnerships.

Workflow

Stage	Activity	Metric
Engage	Client/scope/fee	Win rate
Survey	Drone/DGPS/drilling	Utilisation
Process	GIS/volumetrics/plan	Accuracy/turnaround
Deliver	Reports/deliverables	Fee/quality
Retain	Periodic retainer	Recurring

9. Regulatory, Licences & Compliance (India)

- **Drone:** DGCA Drone Rules — registration, remote-pilot certificate, airspace/zones, operations compliance.
- **Survey:** qualified surveyor/mine-surveyor credentials (statutory surveys); accuracy standards.
- **Drilling:** safety; site permissions (client-held); labour.
- **General:** company; GST; contracts/data confidentiality; PI insurance advisable.

10. Organisation & Manpower Plan

Role	Yr 1	Yr 2	Yr 3
Promoter / principal surveyor	1	2	2
Surveyors / drone pilots (DGCA)	4	7	11
GIS / data analysts	2	4	6
Drilling crew (if drilling) & field	3	5	8
BD & admin	1	2	3
Total	11	20	30

11. Implementation Timeline & Milestones

Phase	Timeline	Milestone
Setup	Month 0–3	Entity, drones/DGPS/rigs, DGCA/credentials, first clients
Ramp	Month 3–12	Projects + retainers, ₹3cr (ramp)
Grow	Year 2	Assets/analysts/retainers, ₹5cr
Scale	Year 3	₹7cr revenue; utilisation & retainers

12. Financial Plan (Illustrative)

All figures are illustrative model assumptions for an Indian context, shown so the promoter can replace them with live rates. They are not projections of guaranteed results. Mine-survey/exploration is an asset-plus-expertise services business; revenue = projects × fee (per-survey/per-metre/retainer); equipment & crew are the main costs; utilisation, fee realisation, tech & expertise are the levers.

12.1 Project cost & means of finance

Capital requirement	₹
Survey assets (drones/LiDAR/DGPS/total stations)	70,00,000
Drilling rig & exploration equipment (optional)	60,00,000
Software (GIS/photogrammetry), IT & vehicles	35,00,000
Working capital (crew/salaries + project WC)	35,00,000

Total project cost	2,00,00,000
Promoter contribution	80,00,000
Term loan / WC finance	1,20,00,000

12.2 Projected Profit & Loss (3 years)

Particulars	Year 1	Year 2	Year 3
Drone/LiDAR survey & volumetrics	1,50,00,000	2,60,00,000	3,60,00,000
Mine-plan / DGPS / boundary surveys	80,00,000	1,40,00,000	2,00,00,000
Drilling / exploration & reserve estimation	70,00,000	1,20,00,000	1,40,00,000
Total revenue	3,00,00,000	5,20,00,000	7,00,00,000
Crew salaries & field cost	1,30,00,000	2,20,00,000	2,90,00,000
Equipment O&M, consumables & travel	70,00,000	1,20,00,000	1,60,00,000
Office, software, overheads & BD	45,00,000	70,00,000	90,00,000
Depreciation, interest & other	30,00,000	35,00,000	40,00,000
Total expenses	2,75,00,000	4,45,00,000	5,80,00,000
Net profit (before tax)	25,00,000	75,00,000	1,20,00,000
Net margin	8.3%	14.4%	17.1%

12.3 Unit economics & break-even

- **Utilisation × fee:** survey-days/asset-hours/drilled-metres × fee; utilisation of assets & crew is the make-or-break; retainers add recurring; analysis/deliverables add value; crew & equipment O&M are the main costs.
- **Asset-plus-expertise:** equipment is moderate/financeable, but expertise & accuracy command fees; tech (drone/LiDAR) lifts productivity & margin; drilling is more asset/utilisation-heavy.
- **Break-even:** at a utilisation/fee level covering crew, equipment O&M, overheads & finance; margins expand with utilisation, retainers, tech & analysis value-add.

12.4 Projected Cash Flow — Year 1 (quarterly, illustrative)

Particulars (₹)	Q1	Q2	Q3	Q4
Opening balance	35,00,000	24,00,000	24,50,000	26,00,000
Fee collections	55,00,000	72,00,000	84,00,000	92,00,000
Crew, O&M, overheads & operating	66,00,000	71,50,000	82,50,000	89,00,000
Closing balance	24,00,000	24,50,000	26,00,000	29,00,000

The business is moderate-capex & cash-generative once utilisation builds; equipment is financeable & retainers smooth cash. Utilisation, retainers, receivable management & a WC line manage cash; the key risks are utilisation/asset-idle, tech/credentials (DGCA/qualified surveyor), activity/project cycle, receivables & accuracy/liability — met with retainers, credentials, tech & QA/accuracy discipline.

12.5 Key Performance Indicators to Monitor

- **Utilisation:** survey-days/asset-hours; drilled-metres; utilisation %.
- **Quality:** accuracy; turnaround; rework/rejection.
- **Mix:** retainer vs. project; drone vs. drilling; analysis value-add.
- **Finance:** fee realisation; net margin; receivable days; DSCR.

13. Funding Requirement & Bankability

Total ask: **₹1.2 crore term loan/WC** against ₹80 lakh promoter contribution — for survey/drilling assets (financeable) & working capital on an asset-plus-expertise base. Fundability rests on assets, utilisation, credentials (DGCA/surveyor), retainers & mining/infrastructure demand; equipment loans are standard. Year-1 profit ₹25 lakh growing to ₹1.2 crore as utilisation/retainers scale; utilisation, tech & credentials are key. DSCR supported by projects × fee; utilisation, fee realisation, assets & demand underpin the model.

13.1 Funding utilisation

Use of funds	₹	% of total
Survey assets (drones/LiDAR/DGPS/total stations)	70,00,000	35%
Drilling rig & exploration equipment (optional)	60,00,000	30%
Software (GIS/photogrammetry), IT & vehicles	35,00,000	17.5%
Working capital (crew/salaries + project WC)	35,00,000	17.5%
Total	2,00,00,000	100%

14. Risk Analysis & Mitigation

Risk	Mitigation
Utilisation / asset-idle	Retainers, diverse clients (mining + infra), BD, asset-mix
Tech / credentials (DGCA/surveyor)	Certified pilots/surveyors, tech upgrade, training
Activity / project cycle	Retainers, mining + infrastructure mix, partnerships
Receivables / project timing	Milestone billing, advances, WC buffer
Accuracy / liability	QA/calibration, credentials, PI insurance, documentation

15. SWOT Analysis

Strengths Tech/accuracy edge; asset-plus-expertise; retainer recurring; drone-survey shift; financeable assets; analysis value-add.	Weaknesses Utilisation-dependent; tech-/credential-reliant; activity-cycle-linked; drilling asset-heavy; accuracy/liability exposure.
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Opportunities Drone/digital-survey adoption; statutory/compliance demand; infrastructure volumetrics; reserve estimation; GIS/analytics; retainers.	Threats Activity slowdown; DGCA/regulatory change; tech commoditisation/competition; in-house survey; client-concentration.
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16. Recommended AiSevak Tools for This Business

This mine-survey/exploration services business would use AiSevak's Mining vertical tools in operations:

- **Utilisation & fees:** utilisation × fee & per-survey/per-metre/retainer, asset-utilisation & realisation tools.
- **Tech & compliance:** drone/DGCA & survey-deliverable (volumetrics/reserve), GST/contract tools (with Ittech & Legal verticals).
- **Practice:** Business Plan, utilisation-economics and break-even/DSCR tools to model the business.

17. Key Assumptions & Notes

- Mine-survey/exploration: asset-plus-expertise services — drone/LiDAR survey, DGPS & drilling delivering volumetrics/mine-planning/reserve-estimation; revenue = projects × fee (per-survey/per-metre/retainer).
- Utilisation × fee – (equipment + crew + travel) decisive; utilisation, fee realisation, tech capability/accuracy & expertise are the levers; retainers add recurring; drilling more asset-heavy.
- Equity + term loan/WC (assets financeable); DGCA Drone Rules (registration/pilot-cert/airspace), qualified surveyor credentials, GST; client holds site permissions.
- Utilisation, tech/accuracy, credentials & demand drive economics; figures illustrative, exclude GST; activity-/compliance-driven.

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