



**EMPOWERING INDIA'S GROWTH
WITH DRONE INTELLIGENCE**

FROM TOWER INSPECTION TO CORRIDOR MAPPING – SMARTER GRID MANAGEMENT

About Us

Vaaru Robotics delivers cutting-edge drone solutions to optimize efficiency, reduce downtime, and enhance safety in power transmission networks. Our certified pilots and AI-powered analytics transform aerial inspections into actionable insights—faster and safer than manual methods.

Our Achievements

50,000+

transmission lines
inspected

8,000+

Flying Hours

300+

Projects Completed

Why Us ?

- ✓ **Industry-Leading Expertise:** Trusted by power utilities and grid operators.
- ✓ **Regulatory Compliance:** Certified pilots and insured operations.
- ✓ **AI-Driven Insights:** Predictive analytics for proactive maintenance.



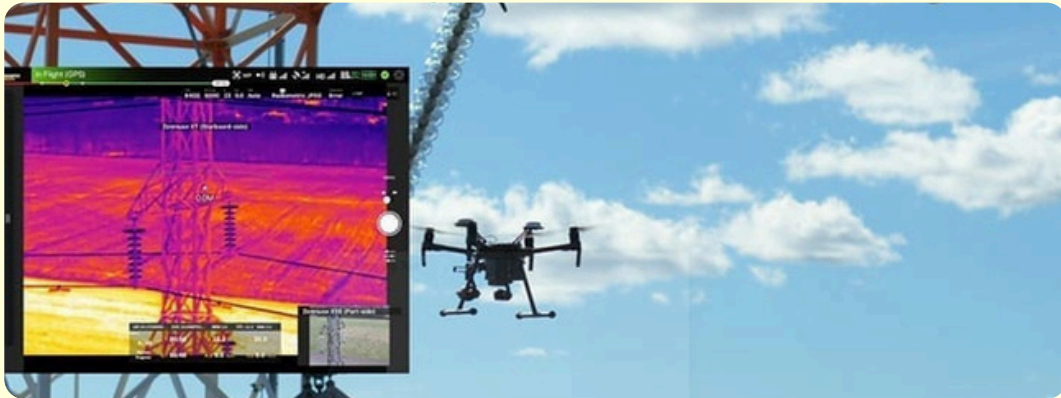
Key Services

1. Transmission Line Inspection

- **Fault Detection:** Identify broken conductors, damaged insulators, and corrosion using HD/thermal imaging.
- **Vegetation Encroachment:** Map tree intrusions in right-of-way (ROW) corridors to prevent outages.

How Drones help

- **Thermal Imaging:** Detect hotspots in conductors and joints.
- **LiDAR Scanning:** Model ROW corridors for vegetation management.
- **AI-Powered Analytics:** Prioritize repairs based on risk severity.



2. Tower Structural Health Monitoring

- **Corrosion & Crack Detection:** High-resolution imaging to assess tower integrity.
- **Foundation Inspection:** Monitor erosion or displacement in hard-to-reach areas.

How Drones help

- **3D Modeling:** Reconstruct towers for detailed defect analysis.
- **Automated Reports:** Generate compliance documentation.
- **Safety:** Eliminate risky climbs with aerial inspections.



(a) Damaged



(b) Dirty



(c) Ageing



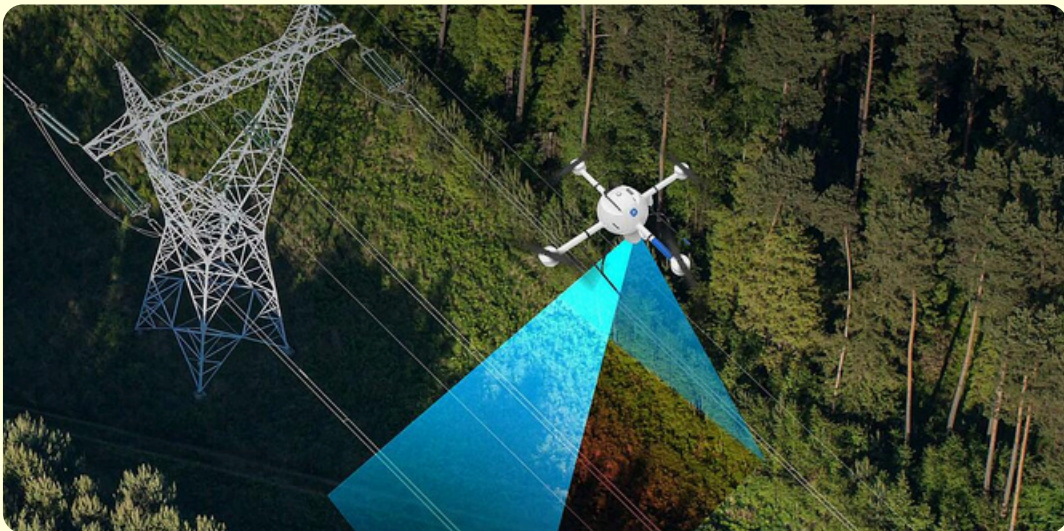
(d) Flashover

3. Corridor Mapping & Surveying

- **ROW Compliance:** Map transmission corridors to ensure regulatory clearance.
- **Terrain Analysis:** Assess landslide risks or erosion near towers.

How Drones help

- **Orthomosaic Maps:** High-res 2D maps for corridor planning.
- **DTM/DSM:** Calculate terrain slopes and clearances.
- **AI Alerts:** Flag encroachments or illegal constructions.



4. Emergency Response & Disaster Recovery

- **Storm Damage Assessment:** Rapid post-disaster inspections to prioritize repairs.
- **Fault Localization:** Pinpoint faults after grid failures.

How Drones help

- **Real-Time HD Streaming:** Live feed for crisis management.
- **GIS Integration:** Overlay damage data on grid maps.

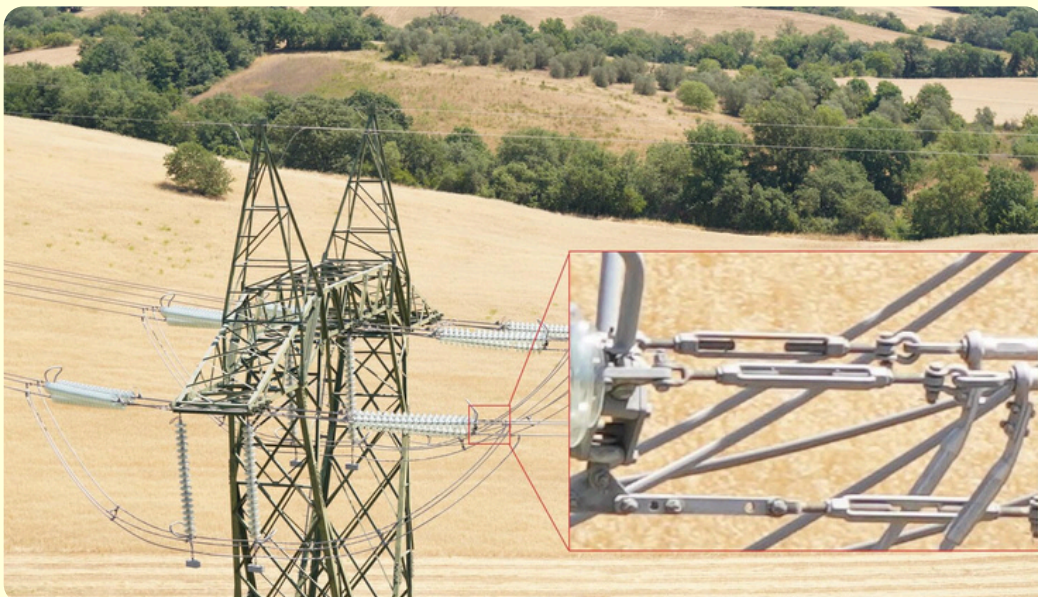


5. Predictive Maintenance & Reporting

- **Trend Analysis:** Track wear-and-tear over time.
- **Custom Dashboards:** Visualize inspection data for asset managers.

What we deliver

- **Automated Defect Logs:** AI-generated repair recommendations.
- **Regulatory Reports:** Ready-to-submit compliance files.



ONE PARTNER FOR BOTH YOUR
GRID SAFETY & LINE
VISIBILITY

THANK
Be the part of our family
YOU

Power-Sector Ready: Trusted by grid operators & utility engineers.

Real-Time Advantage: From tower scans to risk flags within hours.

Budget-Efficient: Replace manual climbs with smart drone reports.



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