OCTAVE

SOLUTION SHEET

Transforming land re-surveying: Fast, accurate, digital



Transforming land re-surveying: Fast, accurate, digital

Modernizing land records across India

India's Digital India Land Records Modernization Programme (DILRMP) and NAtional geospatial Knowledge-based land Survey of urban HAbitations (NAKSHA) aim to transform land management through:

- Digitized land records
- Integrated spatial and textual data
- Transparent processes and reduced disputes
- GIS-enabled cadastral mapping
- Faster resident services

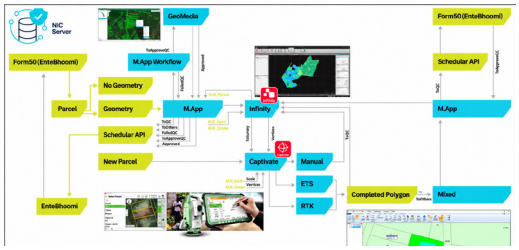
Proven expertise and impact

Large-scale digital survey programs have been completed using advanced technologies, with key achievements including:

- 7-plus Lakh hectares surveyed
- 53-plus Lakh land parcels mapped
- 490-plus villages covered
- 1,500 GNSS Rovers and 200 ETS integrated
- Less than 2.5 years delivery with 5 cm accuracy

Specialized workflows

- QA / QC maker-checker validation
- Automated land parcel mapping with QR codes
- Centralized legacy data catalog
- Real-time survey dashboards and heat maps
- 3D parcel mapping for urban areas

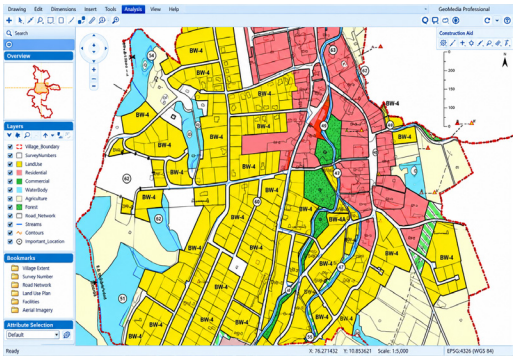


Land Parcel Workflow: Integrated GIS solution for parcel management, field surveys, validation and approvals

Octave's end-to-end digital survey solution

Octave's solution delivers a **fully integrated cadastral mapping system**, including:

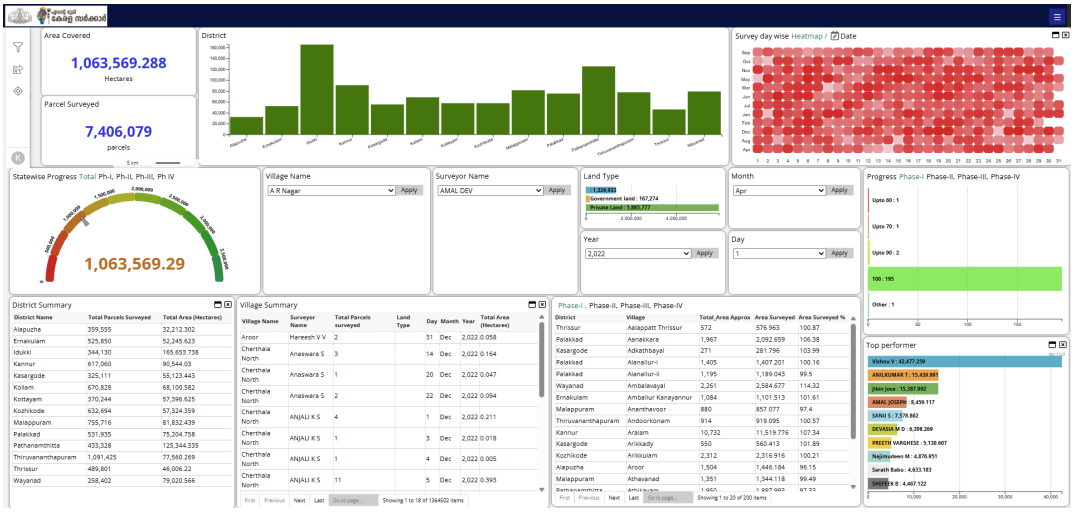
- Digital verification of raster and vector maps
- Integration with **Records of Rights (RoR)**
- Real-time map updates and mutation services
- Seamless workflows across the land revenue system



GIS Land-Use Planning Map Interface: GIS-based cadastral mapping with custom workflows for land parcel identification, boundary verification, subdivision, consolidation and land records management

The digital survey solution integrates with Bhu-Naksha, a comprehensive, web-based cadastral mapping solution developed by the National Informatics Centre (NIC) under the Government of India's Department of Land Resources. It allows residents and officials to view, verify and digitize geo-referenced land maps (parcel maps) directly linked with textual land records. Additionally, the digital survey solution allows users to leverage other modern tools for **high-precision mapping**.

- Real-time kinematic (RTK) devices
- Robotic Total Stations
- Tablet-based field mapping
- Cloud-enabled geospatial processing
- Real-time validation and quality control



Kerala Land Records Dashboard: Interactive dashboard for monitoring land survey progress, parcel statistics and surveyor performance

Core solution components

Octave GeoMedia Professional

- Advanced geoanalysis and visualization (for example, variation of area between ROR and re-survey)
- Seamless data integration (for example, shapefiles, GeoJSON, PostGIS)
- Custom spatial modeling (commercial off-the shelf (COTS) functionality)

Octave Alto Enterprise (formerly M.App Enterprise)

- Monitor – Evaluate – Act framework
- Real-time dashboards
- Worflow automation
- 3D geospatial analytics

Octave geospatial platform

Unified platform transforms data into actional insights.

- Real-time dashboards and analytics
- 2D / 3D / 4D geospatial visualization
- Integration with enterprise and sensor data
- Secure, role-based access
- Configurable workflows

About Octave

Octave is a leader in enterprise software, turning data into decisive action and intelligence into your edge. Our software solves for and simplifies complexity, from the design and build to operations and protection of people, property and assets – for any scope, at any scale. For decades, we've partnered with customers to sharpen performance, elevate efficiency, and amplify results. From factory floors to entire cities, our solutions are tuned to scale up what's possible from day one onward.

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More information at octave.com