

SOLUTIONS FOR FORESTRY



COMPANY PROFILE

Satellogic specializes in Earth Observation data collection and analytical imagery solutions for forestry.

- Satellogic **designs, builds and operates its own fleet of Earth Observation satellites** to collect affordable high-resolution imagery with high recurrence for decision-making in a broad range of forestry applications.
- Specialized in computer vision and big data analytics, Satellogic uses state-of-the-art artificial intelligence (AI) and proprietary algorithms to help forestry professionals solve problems and meet their goals.

MULTISPECTRAL CAMERA

Sub-meter Resolution



HYPERSPPECTRAL CAMERA

25-meter Resolution



FORESTRY SOLUTIONS

OPERATIONAL MANAGEMENT



Tree count

Weed detection and classification

STRATEGIC MANAGEMENT

- Market intelligence at a regional to global scale
- Carbon stock
- Tree species and forest classification
- Wildfire & risk management
- Deforestation

Operations monitoring (harvesting, pruning and thinning)

PLANNING

- Prescribed burning monitoring
- Infrastructure and transportation
- Compliance

Prediction of biophysical variables (mensuration)

Wood piles monitoring



FORESTRY APPLICATION EXAMPLES

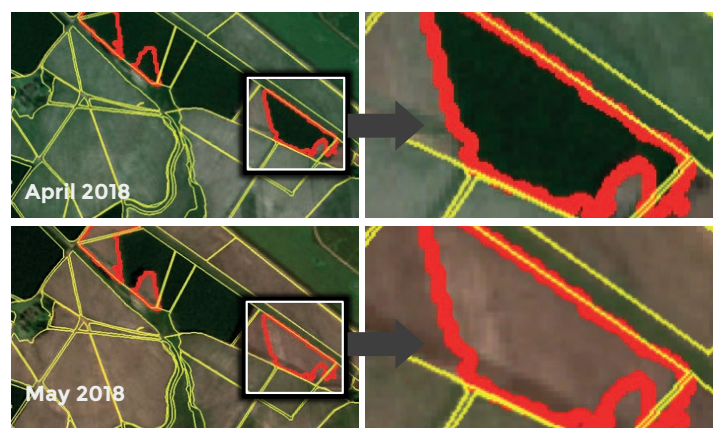
OPERATIONS MONITORING

SOLUTION FEATURES:

- Monitor the operations (harvesting, thinning and pruning) within the forest stands
- Estimate the amount of harvested timber

CLIENT BENEFITS:

- Cost-effective continuous operational data for timely decision making
- Early detection of theft and illegal harvesting allowing quick countermeasures



USE CASE: AUTOMATED HARVEST MONITORING IN ARGENTINA

AUTOMATED TREE COUNT

SOLUTION FEATURES:

- Tree and stand count using high resolution imagery or other data sources

CLIENT BENEFITS:

- Precise automated tree count services based on satellite/drone imagery to deliver reliable, timely and precise information to create or update forest inventories
- Assess tree health plantation quality
- Improve logistics and replanting activities



USE CASE: AUTOMATED TREE COUNT (12 MONTHS OLD EUCALYPTUS) IN URUGUAY

FORESTRY APPLICATION EXAMPLES

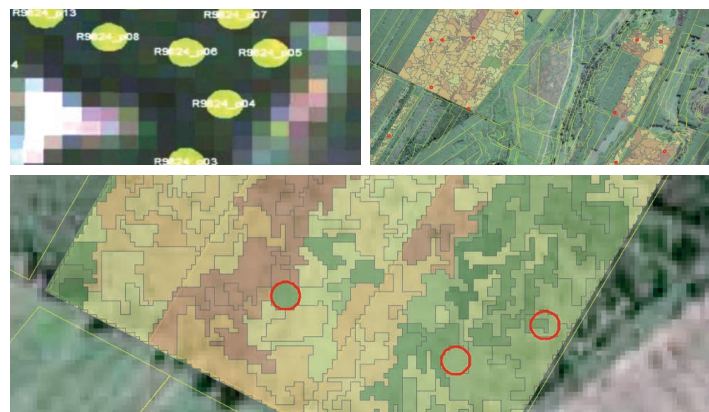
PREDICTION OF BIOPHYSICAL VARIABLES

SOLUTION FEATURES:

- Predict biophysical variables with satellite images (volume, yield, height, basal area, DBH, etc)

CLIENT BENEFITS:

- Improve forest stand management
- Improve field inventories activities
- Improve growth models
- Assess and predict yield



USE CASE: BASAL AREA AND WOOD PRODUCTION PREDICTION (M³/HA) TO IMPROVE TRADITIONAL FIELD FORESTRY INVENTORY

TREE SPECIES DETECTION

SOLUTION FEATURES:

- Management, planning and inventory mapping

CLIENT BENEFITS:

- Improve strategic management (wood supply)



USE CASE: EUCALYPTUS AND PINE TREE (> 3 YEARS OLD) DETECTION FOR STUDYING POTENTIAL WOOD SUPPLY ON A REGIONAL LEVEL

FORESTRY APPLICATION EXAMPLES

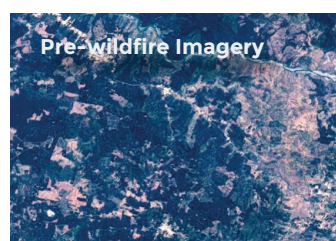
AUTOMATED DETECTION OF FIRE-AFFECTED AREAS AND SUBSEQUENT RECOVERY LEVELS

SOLUTION FEATURES:

- Detect and map the area affected by all wildfires within days
- Monitor the recovery level of timber after the wildfires

CLIENT BENEFITS:

- Cost-effective data for detailed decision making with fast turn-around time
- Generating more detailed forest management plans by understanding controls for forest regeneration and changes in postfire plant communities



USE CASE: ANALYSIS OF DEVASTATING JANUARY 2017 WILDFIRE THAT BURNED CROSS CHILE AND CAUSED SUBSTANTIAL ECONOMIC DAMAGE

SOLUTION BENEFITS

- Improve baseline data for forestry management by providing continuous and frequent area-wide information
- Conduct change detection, historical trend analysis and long term monitoring
- Reduce time and manpower required to collect and process forest management information
- Increase detection and mapping accuracy compared to ground survey techniques
- Reduce pesticide control cost and application time by targeting pinpointed sites rather than unnecessarily large areas
- Justify program funding using up-to-date accurate data
- Collect valuable data for additional analytical applications
- Data fusion with client data or other data sources, like Lidar, Radar, etc. for comprehensive results

OTHER APPLICATIONS INCLUDE

- Tree species delineation
- Stand density
- Tree Age
- Tree height
- Wildfire risk assessment
- Tree Crown measurements
- Deforestation
- Carbon stocks
- Change Monitoring



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