

CYIENT



**NEXT GENERATION  
VEGETATION  
MANAGEMENT WITH  
ADVANCED MACHINE  
LEARNING**



The maintenance and safeguarding of electrical network assets is an essential requirement to provide safe, reliable, and uninterrupted power supplies to consumers. One of the major causes of power outages results from the environmental impact of vegetation encroachment on power supply lines. Ensuring that assets are free from such issues is an essential, recurring, but expensive obligation for electric utilities.

## Next Generation Vegetation Management

Cyient's solution addresses the aerial inspection needs and decision-making process for electrical utility asset maintenance.

Data is acquired from various sources such as mobile, airborne, terrestrial, UAV, and enterprise data to capture asset conditions in the field. Our solution then converts these separate datasets into a seamless 3D virtual map.

Significant time and cost savings are achieved by leveraging advanced machine learning techniques. To achieve this, traditional data processing tasks are automated, deploying advanced analytical techniques to vegetation imagery, sag and sway analysis, automatic identification of asset defects such as damaged insulator plates and bending poles, and encroachments into the right of way, among others.

## Benefits

### Improved operational efficiency by:

- precise visualization of network corridors
- streamlined maintenance of assets and improved service reliability
- integration with enterprise systems

### Reduced maintenance costs through:

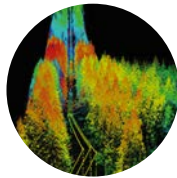
- automated data processing
- automated issue detection
- delayed data acquisition, leveraging intelligent vegetation growth modeling

### Improved revenue:

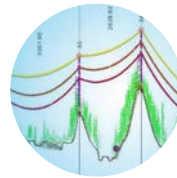
- saving up to 1.5 Mn USD for every 1,000 km of network
- saving up to 40% on annual automated assessments of asset condition
- eliminating millions of kilometers of travel, reducing risks and incidents



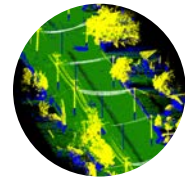
Multiple Data Sources



3D Virtual Assets



Analytical Apps



Automated Reports

## Vegetation Management and Engineering Analysis

- Mobile
- Airborne
- Terrestrial
- UAV
- Enterprise data

- 3D virtual maps
- Automated data processing
- View assets from desktop and mobile

- Encroachments
- Sag and sway
- Growth model
- Automated damage detection

- Quantify work with volumetric analysis
- Review and report
- Integration with enterprise systems

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