

SOLUTION

Condition-Based Vegetation Management for Electrical Utility Networks

CATALYST INSIGHTS Vegetation Management

CATALYST INSIGHTS Vegetation Management delivers network-wide insights that show where pruning can deliver best improvement in asset performance and risk.

The Need to Target Resources

Vegetation is the single largest cause of outages; it contributes to asset damage, wildfires and increasingly frequent extreme weather means risk exposure and outages continue to grow.

Unsurprisingly, vegetation management is often the largest operational cost, exceeding \$100M USD annually in larger US utilities - approximately 75% of overhead network operating expenses. Such substantial budgets and work programs mean networks that rely on regular trimming cycles are missing opportunities to reduce risk and improve resilience and reliability.

Risk is Not Regular

Grow-in and fall-in risks vary significantly across networks but, without network-wide insights into current vegetation conditions, utilities are forced to operate on regular cycles of inspect and trim of anywhere from 3 to 8 years. Treating all areas equally means field crews are busy inspecting and trimming slow growing areas, while fast tree growth or declining health can outpace revisits in others. With extreme weather increasing, fall-in risks will also be missed, especially outside the right-of-way. The result is inefficient use of resources that leaves unaddressed risk.

Breaking the Cycle: Condition-Based Vegetation Management



**Increase
Reliability**



**Reduce
Risk**



**Optimize
Operations**

Achieve greater results with the same resources

CATALYST INSIGHTS Vegetation Management is a satellite-based risk monitoring service that helps utilities break from regular calendar-based pruning and move to condition-based operation that focuses resources on areas of highest risk. It delivers actionable network wide insights on grow-in and fall-in risk over the entire right of way and adjacent land to:

- Optimize regular operations
- Audit post-work completion
- Assess damage after disruptive events



Reliable. Configurable. Traceable.

INSIGHTS combines intelligence extracted from high-resolution satellite imagery with utilities' asset, operational and environmental data. Processing then identifies danger trees in 3D to calculate system risk with quantified tree-specific grow-in and fall-in threat.

Modelling accuracy can be enhanced with tree health and environmental data. Unlike AI black-box models, INSIGHTS' science-based risk analysis provides traceability.

Risk scoring can be tailored to operators' needs to reflect line geometry, their own clearance standards and end-customer impact. Utilities can define where and when analyses are run, to plan trimming, audit post-work completion or assess damage after disruptive events such as storms.

As a data as a service solution, it is easy to deploy and integrate with existing environments and work processes. The analytic results can be viewed in the INSIGHTS web-app or delivered to customer's systems such as GIS and ERP.

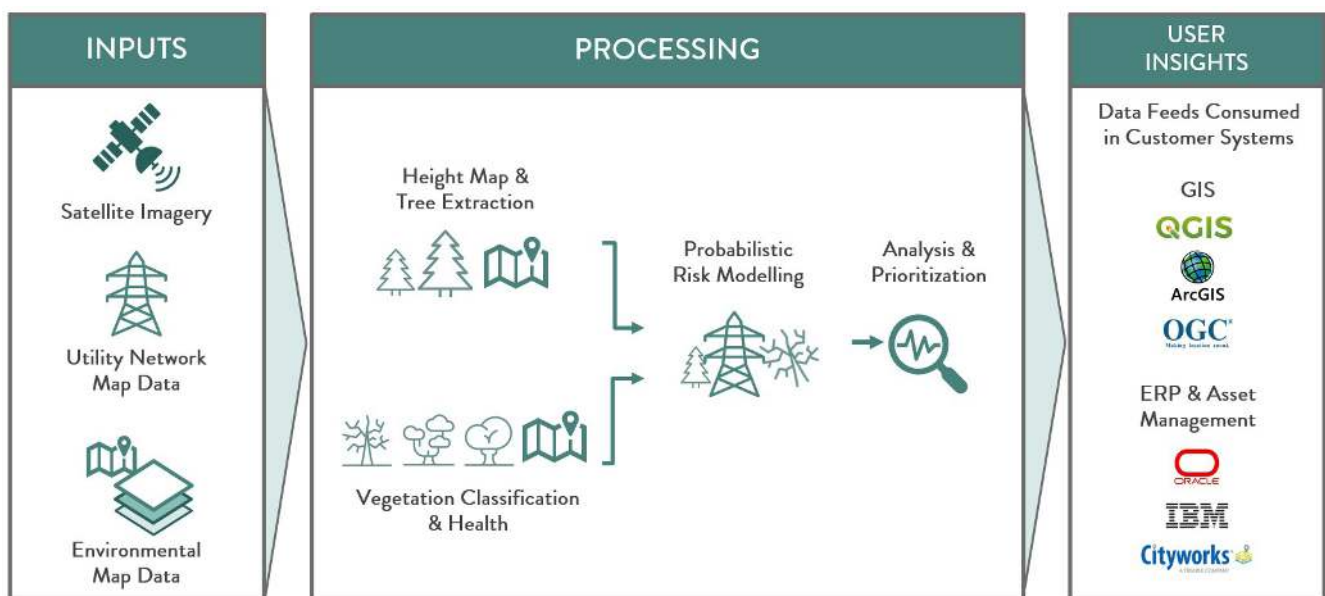


Figure: Up-to-date, network-wide insights on vegetation risk enable utilities to achieve greater results with the same resources by targeting the areas at highest risk.

CONNECT WITH CATALYST TODAY

email hello@catalyst.earth and discover how CATALYST INSIGHTS Vegetation Management can **identify your network's top ten risks**.

Over 80% of responding utilities still rely on regular cycles and more than 50% said their UVM budget was not adequate.

The University of Wisconsin and CNUC survey, Utility Vegetation Management in North America

About CATALYST

CATALYST is a PCI Geomatics brand, which has been introduced to put our leading-edge technology into the hands of decision makers. CATALYST provides proven algorithms rooted in photogrammetry and remote sensing to offer engineers, environmental management, and other professionals accessible earth data measurements on a reliable basis derived with leading edge, scalable software solutions and platforms.

We're a startup – with hundreds of algorithms, scalable solutions, and decades of experience.

To learn more, visit www.catalyst.earth