INTERLINK
FOR UTILITIES

Cost and complexity of managing vegetation growth have been increasing for utilities. Driven by the struggle of climate change and the fast-approaching energy transition, there is a growing need for automating field operations. Deloitte, in collaboration with Google, has developed a solution to proactively maintain vegetation surrounding critical assets in the field for utilities, oil and gas, industrial products, and others. **Interlink for Utilities**, leveraging Google Cloud tools including BigQuery, Google Earth Engine, DataProc, and Vertex AI, maintains a technology-agnostic approach, adapting to a company's existing technology ecosystem to best fit their needs.

FIELD OPERATION CHALLENGES

Utilities with extensive field assets face challenges that require field service digital transformation to stay ahead and navigate.

The fast-approaching energy transition

Managing field assets has become more challenging and complex than ever before due to an increase of distributed infrastructure, new areas such as EV and solar, as well as ambitious public sector goals. Boosting reliability, resilience, and security all while moving to cleaner power will require a comprehensive new approach.

The struggle with climate change

Rarely a week goes by without the collision of climate change and utilities, be it events like wildfires or extreme cold or chronic changes like drought or rising temperatures, ER&I companies are constantly challenged to re-imagine how to manage a dispersed network of diverse infrastructure. These conditions put constant stress and pressure on utilities to be agile and proactive.

The proliferation and complexity of assets

Utilities are managing 10x times more assets than they were managing 20 years ago. Companies with assets in the field now maintains and oversee a sprawling ecosystem of assets with different maintenance needs, compliance regimes, operating scenarios, and depreciation timelines, necessitating a thorough re-thinking of how they manage and maintain their assets.

VEGETATION MANAGEMENT OVERVIEW

Proactive planning, monitoring, and control of plant growth in specific areas around field assets to ensure the safety, reliability, and efficiency of infrastructure.

#1 — **Single largest cause of service outages** in US per Federal Energy Regulatory Commission (FERC)

$100M — **Average annual spend** on Vegetation Management by individual utilities in the US

$6-8B — **Estimated Annual spend** on Vegetation Management by Utilities across the US

$1M — **Regulatory fine per violation**, per FERC standard FAC-003, for failure to address vegetation encroachment requirements

Source: https://www.tdworld.com/vegetation-management/article/21239691/outsmart-vegetationrelated-power-outages

INTERLINK FOR UTLITIES OVERVIEW

Interlink's leading AI models enable Field Service operation optimization, enhanced environmental stewardship, and promotes safety.

1 Collect & Integrate Remote Sensing Datasets

Use-case specific datasets are curated within a hyperscaler environment.

2 Build Geospatially Precise Digital Twin

Correct asset and conductor GIS through the conflation of imagery with client asset GIS / attributes resulting in 3D vector models that account for line sag / sway.

3 Catalogue Unique Trees & Visualize Analytics

Identify distinct trees & attributes with AI. Visualize and perform analytics, leveraging the distinct tree database.

4 Auto-Inspect Unique Trees & Prioritize Work

Utilize the remote sensing imagery to automatically create risk prioritized work orders.

5 Dispatch Crews with AI Optimized Routing

Natively integrate AI work orders with various field service applications.

ANTICIPATED ADVANTAGES

Interlink can deliver tangible results by enabling:

- ☑ **Gained efficiency** of vegetation inspections
- ☑ **Reduced risk** from AI model evaluation
- ☑ **Integrated field execution** by deployment within existing work management tools

LEARN MORE

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