

An aerial photograph of a tall, silver metal lattice power line tower. The tower is surrounded by a dense, lush green forest. Several high-voltage power lines extend from the tower across the frame. To the right of the tower, a calm river reflects the surrounding greenery. In the bottom left corner, a person's hand is visible holding a tablet that displays a smaller version of the same aerial image, with a finger pointing at the tower.

CYIENT

ENHANCE SERVICE RELIABILITY WITH NEXT-GEN VEGETATION MANAGEMENT SOLUTION

Helping electric utilities optimize asset maintenance through remote monitoring for vegetation encroachments and asset conditions.

Overview

Providing reliable and uninterrupted power is crucial for utilities. And achieving this goal includes seamlessly protecting electric network assets from natural vegetation and weather-related damages that disrupt continuous supply—even in challenging times.

Besides being a leading cause of wildfires, unattended hazardous vegetation growth around the network increase the risk of power outages, unplanned downtime, physical damage, revenue loss, and financial liabilities. The manual approach to inspecting network corridors is time-consuming, expensive, places the workforce in the way of risk, and yet, delivers mixed results.

Not anymore. Cyient's cloud-based vegetation management solution powered by advanced technologies, including GIS, AI, and cloud computing, helps electric utilities optimize asset maintenance through remote monitoring, thus enhancing service delivery and reliability.

OPTIMIZE ASSET MAINTENANCE WITH AN AUTOMATED SOLUTION

Cyient's vegetation management solution integrates data acquired from several sources, including mobile, terrestrial, UAV, and enterprise data, to create a seamless 3D virtual map for a holistic view of the network. It helps electric utilities monitor and identify potential risks in the right of way of their network and assets and enhance maintenance operations. Our solution enables utilities to:



Safeguard network and assets



Reduce maintenance costs



Improve network reliability

By automating traditional data processing, asset mapping, and condition assessment tasks, our solution provides insights on vegetation encroachments with accurate location details along with their threat level. It also offers insights on asset defects that need to be replaced or repaired, enabling electric utilities to plan and prioritize vegetation management or asset maintenance activities.

In addition to eliminating the need for human intervention by automating processes, the solution offers analytics for line clearances, change detection, tower lean detection, and vegetation growth modeling, among others. It also helps reduce operational and maintenance costs and inefficiencies by providing improved visibility into the current state of the network corridor.



SOLUTION FEATURES



Automated LiDAR classification
and feature extraction



Asset mapping using advanced
computing technologies



Digital twin or 3D virtual model for a
360-degree network visualization



Automatic asset detection and condition
assessment using computer vision



Cloud-hosted app for anytime, anywhere
access to insights and information



Integrated with field force app for work
assignments, monitoring, and tracking



SPEARHEAD SERVICE

SPEARHEAD SERVICE RELIABILITY AND REDUCE OUTAGES

The Cyient vegetation management solution enables utilities to significantly improve overall service reliability by reducing outages and offering the following business benefits:

Improved operational efficiency with high-quality insights and reduced processing time—from data acquisition to insights



Better decision-making through digitized inspection, data collection, and processing that help improve asset health



Increased safety and field-force well-being by eliminating field inspections in hard-to-reach places and areas



Potential savings of up to \$1.5 million for every 1,000 km of network over three years

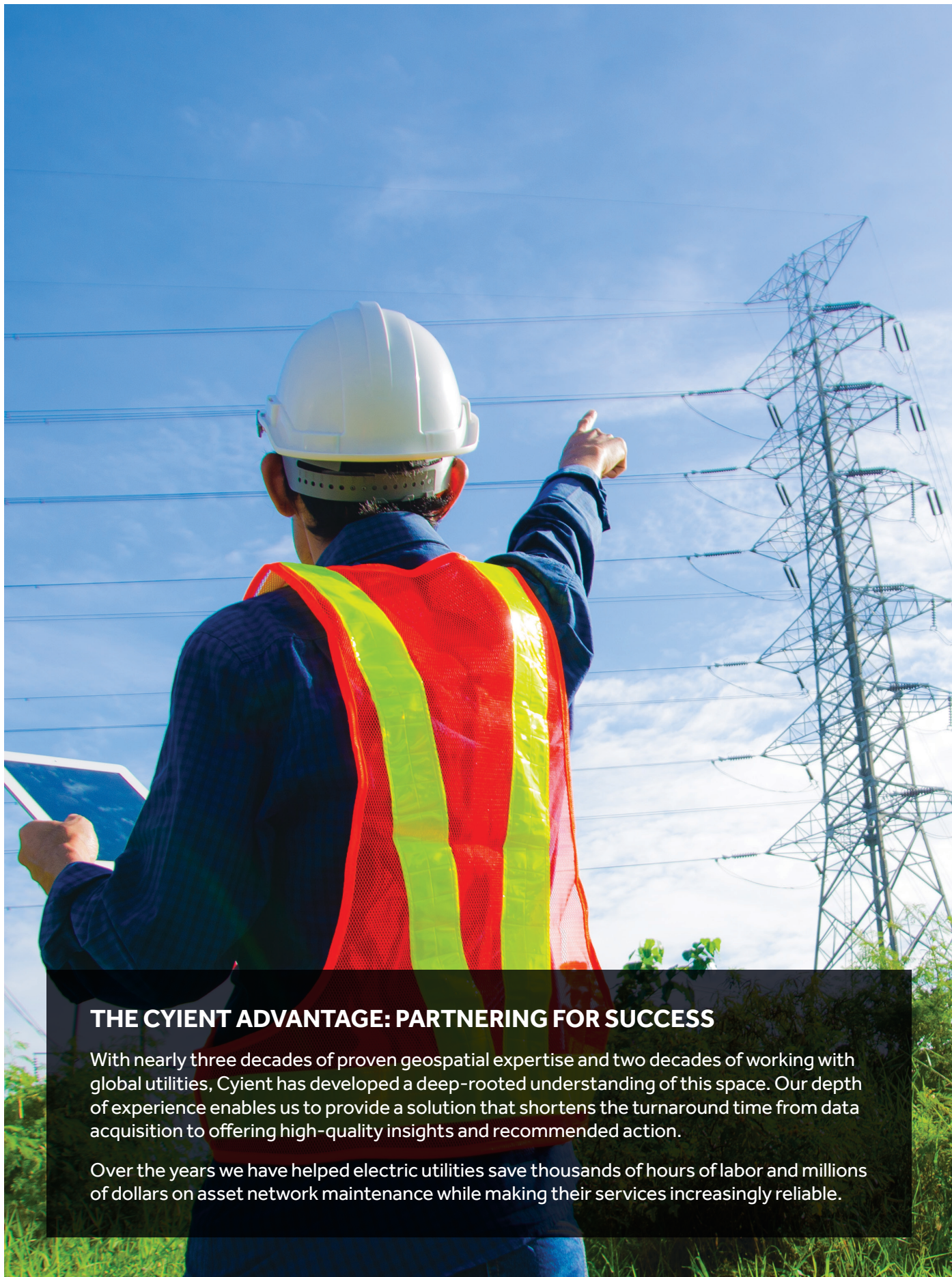


Up to 40% savings on annual assessments of asset condition



Reduced costs of logistics, travel, and associated risks





THE CYIENT ADVANTAGE: PARTNERING FOR SUCCESS

With nearly three decades of proven geospatial expertise and two decades of working with global utilities, Cyient has developed a deep-rooted understanding of this space. Our depth of experience enables us to provide a solution that shortens the turnaround time from data acquisition to offering high-quality insights and recommended action.

Over the years we have helped electric utilities save thousands of hours of labor and millions of dollars on asset network maintenance while making their services increasingly reliable.

About Cyient

Cyient (Estd: 1991, NSE: CYIENT) is a global engineering and technology solutions company. As a Design, Build, and Maintain partner for leading organizations worldwide, we take solution ownership across the value chain to help customers focus on their core, innovate, and stay ahead of the curve. We leverage digital technologies, advanced analytics capabilities, and our domain knowledge and technical expertise, to solve complex business problems.

We partner with customers to operate as part of their extended team in ways that best suit their organization's culture and requirements. Our industry focus includes aerospace and defense, healthcare, telecommunications, rail transportation, semiconductor, geospatial, industrial, and energy

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