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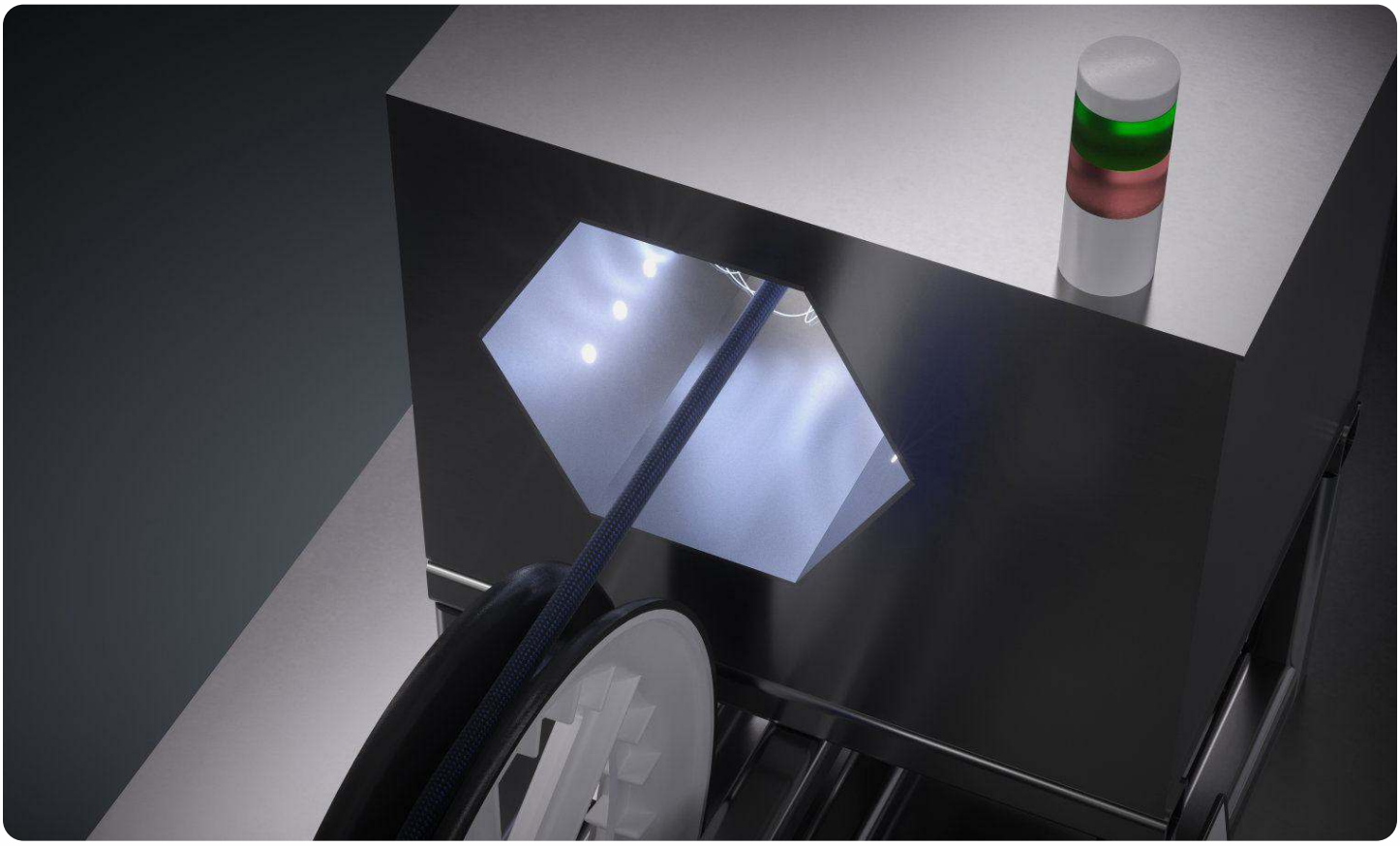
TVA TENNESSEE VALLEY AUTHORITY

Tennessee Valley Authority Utilizes Scope Computer Vision Technologies for Safer, More Efficient Utility Line Inspections



Customer Case Study

Tennessee Valley Authority Stringing Line Inspection

The Tennessee Valley Authority (TVA) is a federally owned electric utility that serves over 10 million people in 7 southeastern U.S. states.

TVA is responsible for maintaining a vast network of power lines and equipment, which requires rigorous inspection to ensure reliable electricity delivery and safe operations. With aging infrastructure and the ongoing demand for upgrades and new builds, TVA needed a solution that would streamline their inspection process, reduce human error, and provide actionable insights for maintenance and repair.

The Job To Be Done

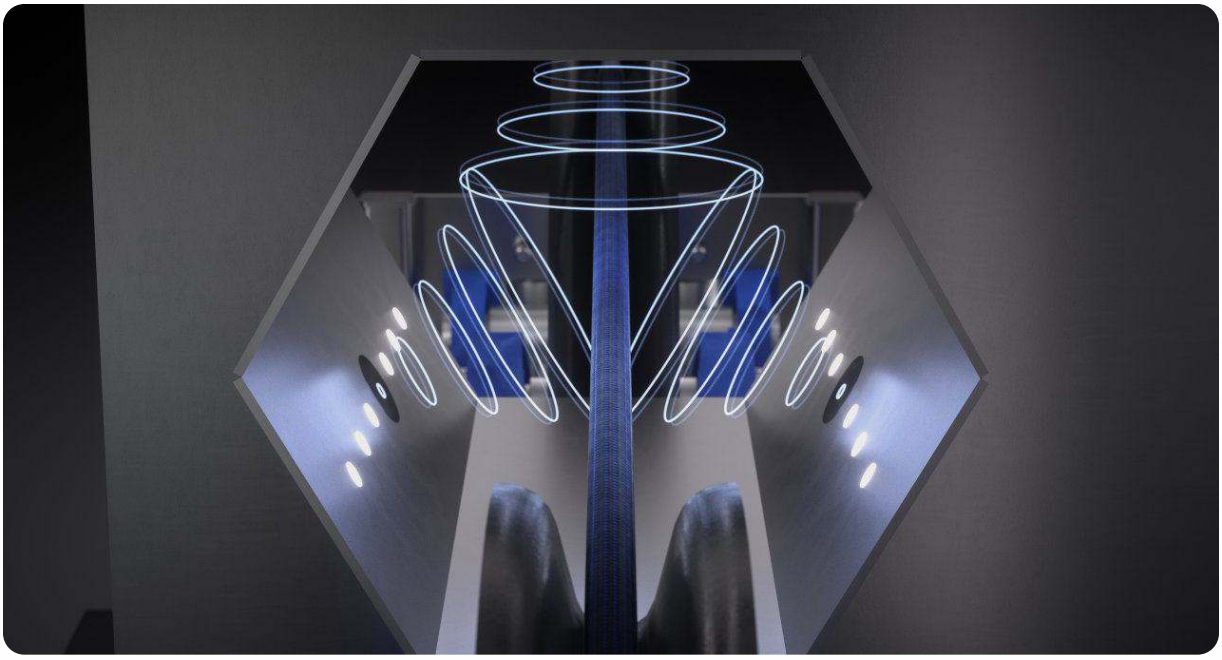
Historically, TVA's utility line inspection process was manual, labor-intensive, and susceptible to inaccuracies. Technicians would spend hours inspecting jacketed and 12 strand stringing lines to identify potential damage, wear, or other hazards that could disrupt service. This method was not only time-consuming but also created safety risks for personnel who had to navigate hazardous environments and energized corridors. Furthermore, human error often led to missed issues, resulting in costly downtime, unscheduled repairs, and safety concerns for TVA employees and the public.

TVA recognized the need for a more precise, technology-driven solution that would not only enhance the safety and efficiency of their inspections but also provide valuable data on the condition of stringing lines across their transmission and distribution networks. TVA turned to Scope Computer Vision Technologies to provide an innovative and effective approach to utility line inspections.

TVA + Technology = Human In the Loop Solution

Scope Computer Vision Technologies deployed an advanced computer vision system that leverages artificial intelligence to automate and improve the accuracy of utility line inspections. Scope's technology utilizes high-resolution imagery and machine learning algorithms to assess TVA's stringing lines, which are used in both transmission and distribution projects. This system will exceed 100 million feet of stringing lines inspected by the end of 2024.

With Scope's solution in place, TVA can now conduct inspections remotely, analyzing visual data collected by drones and other inspection tools. This allows for safer inspections, as employees no longer need to access energized corridors directly. The Scope system also provides real-time insights into the condition of the infrastructure, helping TVA's team make data-driven decisions regarding maintenance, upgrades, and repairs.



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“Scope’s technology is being utilized by North America’s largest utility players. When we onboarded the technology, we immediately partnered with the Scope team to develop models for specific rope types TVA desired to continue leveraging. The ongoing support and constant improvement in the technology helps support our safety mission of augmenting humans where applicable.At TVA we are on an innovation mission to leverage technology to positively impact our grid transformation and Scope’s technology was a great fit.”

Cody Young
Supervisor - Transmission Lines & Helicopter Support

Scope

Make every pull a safe pull

Stringing Line Safety Best Practices

Guidelines for Maintaining Fiber Rope Stringing Lines in the Overhead Electric Utility Sector

visionbyscope.com/Best-Practices

Scope Computer Vision Technologies

Prevent critical line failures, increase safety, and protect operations.

visionbyscope.com

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