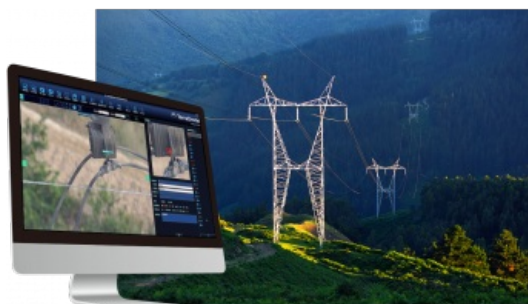


# Terra Drone Launches UAV and AI-based Solution for Power Asset Inspection



Terra Drone Corporation, a leading provider of industrial unmanned aerial vehicle (UAV or 'drone') solutions, has unveiled a new UAV and artificial intelligence-based solution set for the maintenance of power transmission and distribution equipment. The solution was developed on the basis of market gaps identified after the inspection of over 90,000km of power lines in BVLOS missions throughout the world.

Acquired data is automatically processed and analysed by artificial intelligence algorithms which are trained to detect crossovers at the bottom of transmission lines, buildings and construction machinery.

## Error detection system

The system identifies rust on bolts, loosening and missing tower parts, birds' nests, etc. and generates a smart report, highlighting the areas that require action. The error (identified anomaly) detection system is accurate up to 92.5%. The algorithm is developed through a process of identifying anomalies in a training dataset of approximately 1,500 images; this allows for a custom solution to be created for the end client where all pertinent anomalies are identified and reported. The development and training of the algorithm only need to be completed once for a particular type of asset and can be implemented easily at different locations on similar assets.

With such a high-precision algorithm, the productivity of AI processing allows for fast actionable results to be provided to clientele. Clients also have the ability to identify the appropriate security protocols for data storage in either a cloud-based or on-premises storage environment. These protocols can then be implemented in a custom client-specific solution.

## Minimizing HSE concerns

Power transmission and distribution companies must conduct periodic inspections of power line infrastructure to ensure reliable electric power distribution, although the conventional methods of deploying ground staff or low-flying helicopters to complete the inspections are typically cost-prohibitive. Conventional helicopter and boots-on-the-ground service also pose health, safety and environment (HSE) concerns with low-flying helicopters and people working in the field. UAV service and AI inspection can aid in minimizing HSE concerns by reducing the number of workers in the field and eliminating low-level manned helicopter missions.

[This solution](#) has been built from ground up with the aim of simplifying and streamlining the maintenance work for transmission and distribution facilities.