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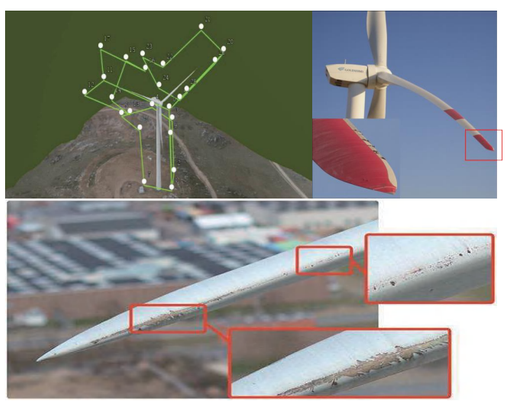
# WIND TURBINE

## DRONE INSPECTION & SURVEY SOLUTION

# Blade Inspection

## Progress

- Traditional inspections rely on manual climbing or ground-based telescopic checks, which are inefficient and pose safety risks.
- Drones equipped with high-resolution cameras, thermal imaging, or LiDAR can quickly and accurately detect cracks, erosion, and coating damage.
- Compared to manual inspections, drones can inspect 5-7 wind turbines per day, significantly improving efficiency while reducing operational costs and safety risks.



# Surveying and Site Assessment

## Progress

- Before wind farm construction, precise mapping of terrain and wind conditions is essential for optimizing turbine placement.
- Drones equipped with LiDAR or photogrammetry technology can efficiently capture high-precision topographic data, navigating complex terrains that are difficult for humans to access.
- Utilizing DJI's built-in mapping software and RTK high-precision positioning system, drones can rapidly survey large areas with centimeter-level accuracy and generate high-resolution 3D models within the same day, significantly enhancing the efficiency and accuracy of site assessment.

# Turbine O&M Monitoring

## Progress

- Drones can conduct regular inspections of wind turbine towers, transformers, and power transmission lines, covering critical areas that are difficult to access manually.
- By leveraging AI-powered image analysis, drones can automatically detect corrosion, cracks, and loose bolts, providing precise maintenance data.
- Compared to traditional inspection methods, drones enhance detection accuracy, response speed, and cost efficiency, significantly improving the overall operation and management of wind farms.