

From Inspection to Intelligence:  
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Smart Inspection and  
Diagnostic Solutions



# From Inspection to Intelligence:

## AI-Driven Multi-Sensor Predictive Maintenance for Resilient Power Infrastructure in Asia

# Overview of OFIL Systems



 **1993** Founded



Core technology

 OFIL's deployments

 **~100** Countries

 **7** Sites



Smart Inspection and Diagnostic Solutions

# OFIL's Inspection Solutions:

## Ensure the Reliability of the Power Grid

Electricity **demand** is growing faster than ever

Increased variable **power generation**

Increasing load and voltage are pushing an **aging power grid** to the limit

**Extreme climate** challenge the GRID's resilience

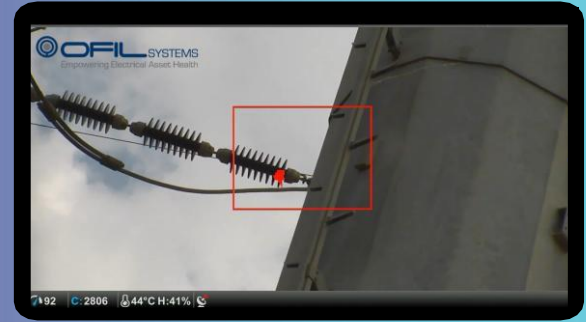
Over **85%** of disruptive failures in high voltage and medium voltage equipment are Partial Discharge (PD) related.



*Catastrophic failure due to insulator defects*

OFIL's SBUV technology detects PD-related faults in an early stage in transmission & distribution systems, substations, switching stations, etc.

**Pinpointing Corona Partial Discharge** and addressing potential equipment failure guarantees the reliable operation of the electrical components



# Inspection and Diagnostics Solutions

## Handheld Cameras



## UAV Camera



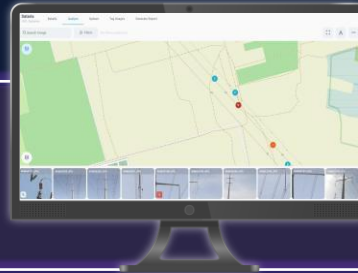
## Core Cameras OEM Integration



## Airborne Helicopter Gimbals



Gridno<sup>stic</sup>



Grid Reliability through  
Image Intelligence

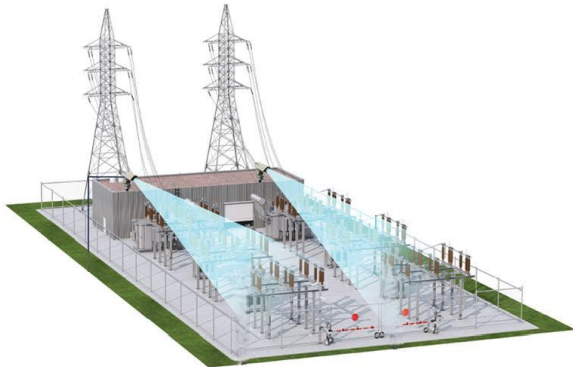
# OFIL's Diagnostic Solutions: Continuous Substation Monitoring



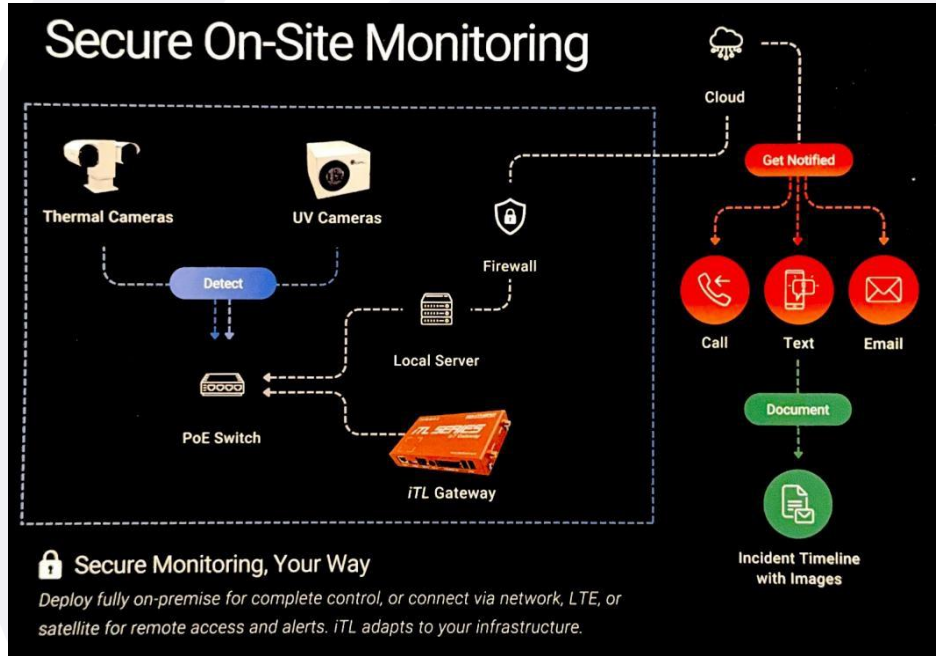
## Continuous Monitoring Platform

Continuous monitoring platform for substations, enabling real-time detection, analysis, alerts, and reporting using UV, IR, and RGB imaging technologies.

- Automatic event detection
- Real-time alerts and notifications
- Automatic periodic reports
- Multi-sensor monitoring platform
- Centralized monitoring dashboard



## Secure On-Site Monitoring



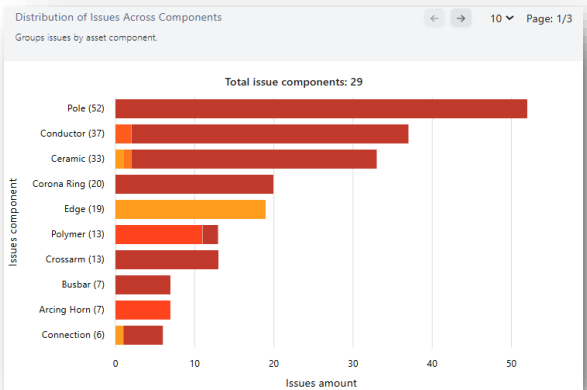
# Introducing OFIL Systems' Gridnostic



# AI-Driven Asset Prioritization & Predictive Analytics

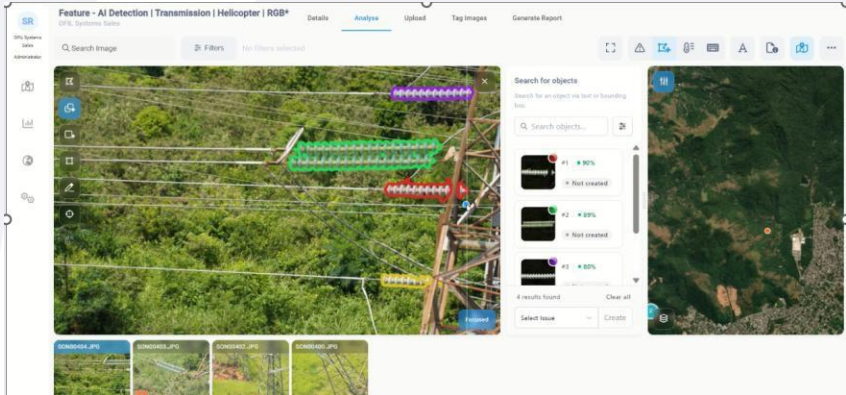


## Gridnostic Executive Dashboards: Distribution of Issues Across Components



- Severity 1
- Severity 2
- Severity 3
- Severity 4
- Severity 5

## Smart Object Annotation & Similar Objects Detection



# Future-Ready Inspection Technologies for Modern Grids



## UAV Inspection of Transmission, Distribution, Substations and Generation

- Aerial Grid Inspection | Commissioning | Washing



micROM HD



**dji**

DJI MATRICE 300 & MATRICE 350 RTK

**ARMUS** **RTROBOTICS**

REALTIME ROBOTICS (RTR) HERA BY RMUS

**XER** Technologies

XER TECHNOLOGIES X8

**arcsky**

ARCSKY X55

# Future-Ready Inspection Technologies for Modern Grids



## Handheld Inspection of Transmission, Distribution, Substations and Generation

- Commissioning
- Periodic Inspections & Maintenance
- Fault Investigation & Repair
- Washing of Powerlines & Substations
- Locating Sources of RFI/AN



UVollé



Luminar HD



## Online Monitoring of Substations

- PTZ Systems
- Fixed Installation



UV Eyclite



UV Eye



UV EyeScope



# Future-Ready Inspection Technologies for Modern Grids



## Robot Mounted Installations

- Substations
- HVDC Converter Halls



UV Eyclite

UV Eye

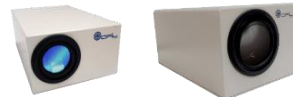


UV EyeScope



## Vehicle Mounted Inspection of Transmission & Distribution Lines

- PTZ Systems
- Fixed Installation



UV Eyclite

UV Eye



# Among our Customers

## Power generation, transmission & distribution



## Other industries and manufacturers



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The image features a central black circle containing the text "Thank you!" and the logo "©FIL". This central circle is surrounded by a vibrant, multi-colored gradient ring that transitions from yellow at the top to blue and purple at the bottom. Two bright green, curved lines arc around the central circle, one above and one below, creating a sense of motion or a stylized frame.

Thank you!

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