



# OFIL Systems Group Overview

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July 2024






## Innovative Inspection Solutions

*The world's leading provider of Solar-blind UV (daytime) Non-destructive Testing technology*

We help keep *electrical assets health, reliability and resilience* by supporting *predictive maintenance* with innovative, smart inspection solutions that *pinpoint, visualize and record Corona partial discharge*

# Company Brief

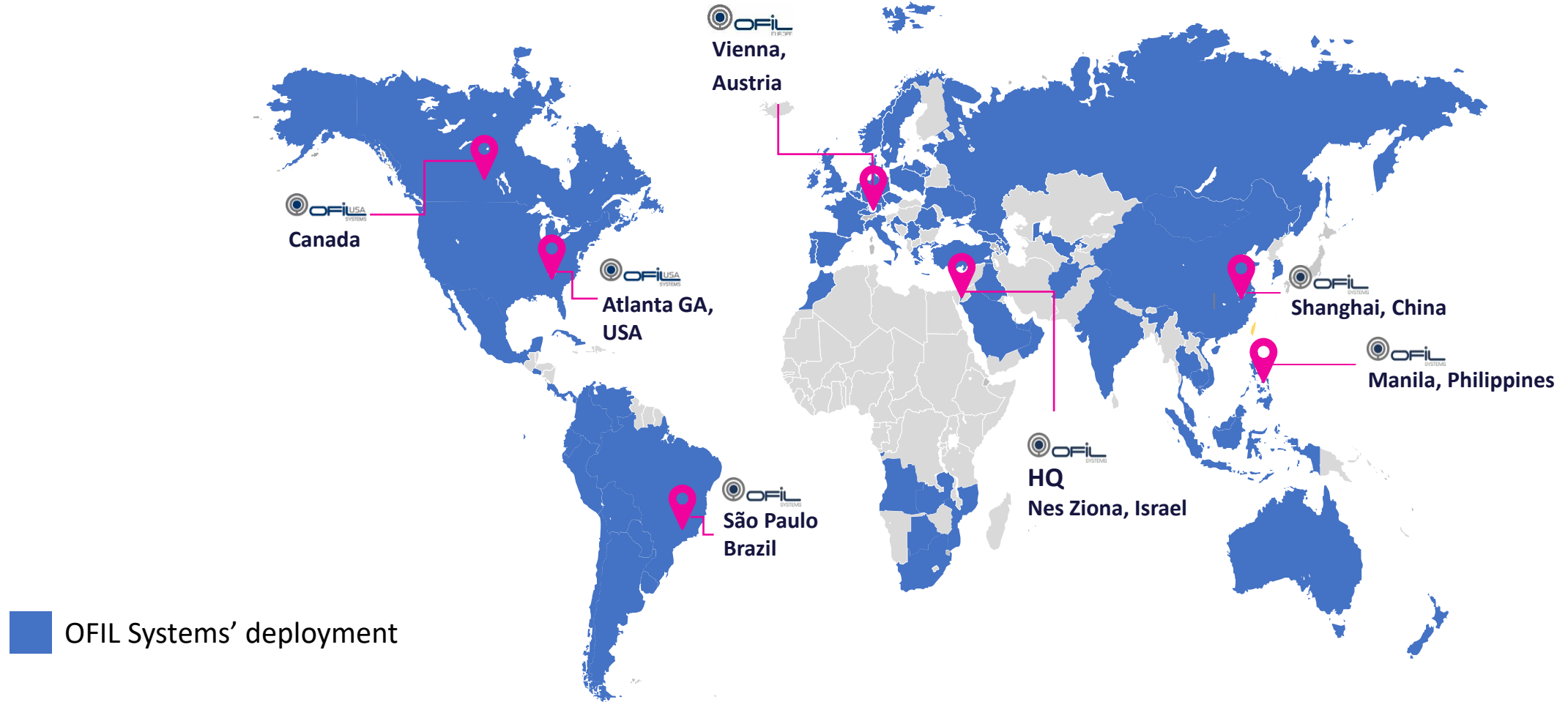
**1993**   
Founded

**7**   
Sites

**+50**   
Employees

**+90**   
Countries (thousands of systems)

# Worldwide Deployment



# OFIL Systems Portfolio



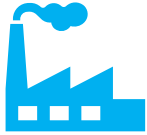
## Electrical Utilities

- ❖ Generation
- ❖ Transmission
- ❖ Distribution
- ❖ Substations



## Manufacturer (MV/HV Devices)

- ❖ Motors & Generators
- ❖ Insulators
- ❖ Cables
- ❖ Transformer
- ❖ Switch Boards
- ❖ Others



## Heavy Industries

- ❖ Mining
- ❖ Oil & Gas
- ❖ Chemical
- ❖ Metallurgy
- ❖ Others



## Service Companies

- ❖ Inspection Service
- ❖ Service Companies
- ❖ Aerial Inspection Services (Helicopters / Drones)
- ❖ Audits Services



## High Speed Rails

- ❖ Overhead Lines
- ❖ Traction Substations

# Among Our Customers

## Power generation, transmission & distribution



## Other industries and manufacturers



# Our Solutions



# OFIL Systems' Solution:

## Ensure the Reliability and Health of the Power Grid

The growing demand for power, aging infrastructure, and overloading of grids are leading to an increasing number of failures. These issues disrupt the continuity of electricity supply, cause unexpected outages, and lead to significant financial losses.

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

OFIL Systems' 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



*Early detection of faults in power systems using Ofil's camera*



*Catastrophic failure due to insulator defects*

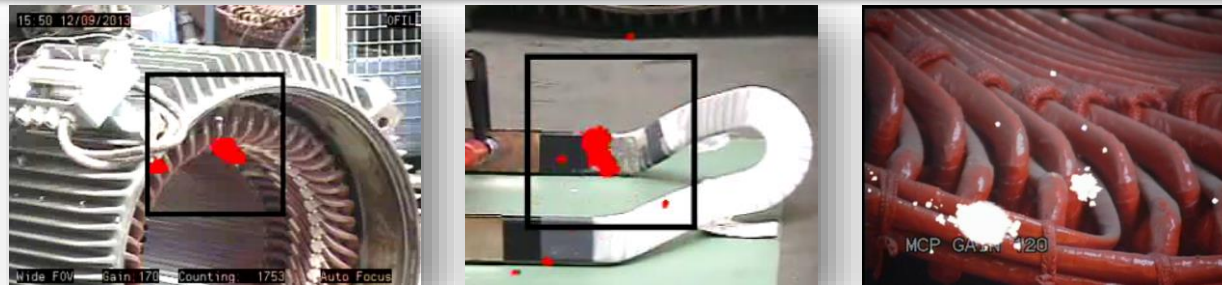


# OFIL Systems' Solution: PD Localization in Generators & Electrical Motors

Partial Discharge (PD) in high-voltage electrical devices such as motors & generators, causes damage to insulation and degrades the performance of the machines over time.

**56%** of generators failures are due to insulation damage.

**Pinpointing and Localizing the PD** assists manufacturers of high-voltage machines and components to repair the faults and improve the quality.



*Early detection of faults in generators using Ofil's camera*



*Motor Insulation failure due to PD*

# OFIL Systems Portfolio



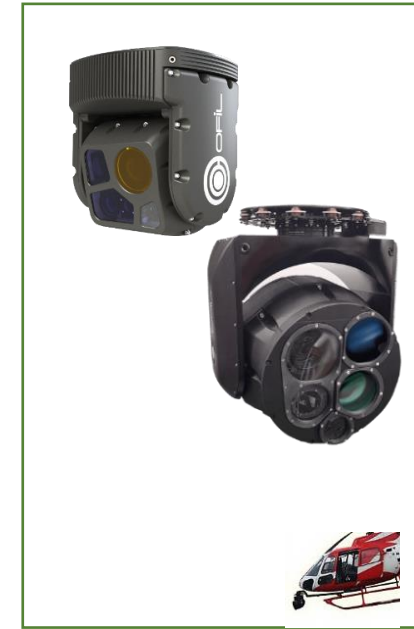
Handheld



UAV



Core Cameras  
OEM Integration



Airborne  
Helicopter Gimbals

# Customer Testimonials



**“ Operating Ofil Systems saves us 0.5M USD of maintenance cost per 100Km per year! ”**

IEC  
Central Lab Manager



**“ Using Ofil’s daylight corona camera helps asset managers extend the life of their overhead lines, improve power transmission efficiency and minimize the risk of equipment failure and unplanned outages. ”**

KINECTRICS  
Service Line Manager, Field Services of Overhead Lines



**“ We are using Ofil cameras to detect partial discharges (PD) on high voltage motors. This helps us repair the motors efficiently and reliably and build a reputation. ”**

ABB  
Motors & Generators Service



**“ OFIL's UV camera is a very effective way to help identify defects in a wide range of different industrial situations. ”**

ENGIE Laborelec  
Expert Technician Electrical Machines



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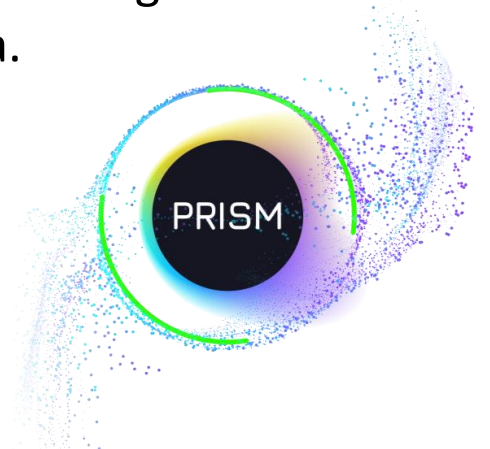
# GROWTH ENGINES

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# PRISM – Advanced Diagnostics, Intelligent Decisions

**SW Solution** - Enhance your data management capabilities with our expertise

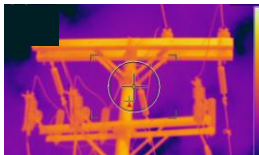
- **Decades of UV leadership:** Leveraging 30 years of pioneering UV technology and HV applications to enhance diagnostic precision.
- **Global utility experience:** Working alongside hundreds of utilities globally, from various geographies and sizes, to refine maintenance strategies and diagnostics.
- **Holistic Solution:** Improves the effectiveness of interpreting UV, visual, and thermal inspection results, designed to simplify processes and deliver actionable insights.
- **Strategic partnership:** We've teamed up with Scopito, developers of a robust data management software that simplifies the analysis, storage, and sharing of visual inspection data.



# PRISM – Advanced Diagnostics, Intelligent Decisions

## Inspection Data

- UV
- Visible
- Thermal



### Asset Health and Severity Management

Effectively monitor asset health and use severity analysis to prevent failures and cut repair costs



### Simplifying Complexity – AI Enabled

Transform complex data into clear, actionable insights with AI models enhancing data interpretation.



### Advanced Sensor Integration

Leverage multi-sensor technology including UV, Visual and Thermal to enhance analysis capabilities



### See the Big Picture

Get a bird's-eye view of the grid with maps & geo-tags



### Streamlined Data Management & Reporting

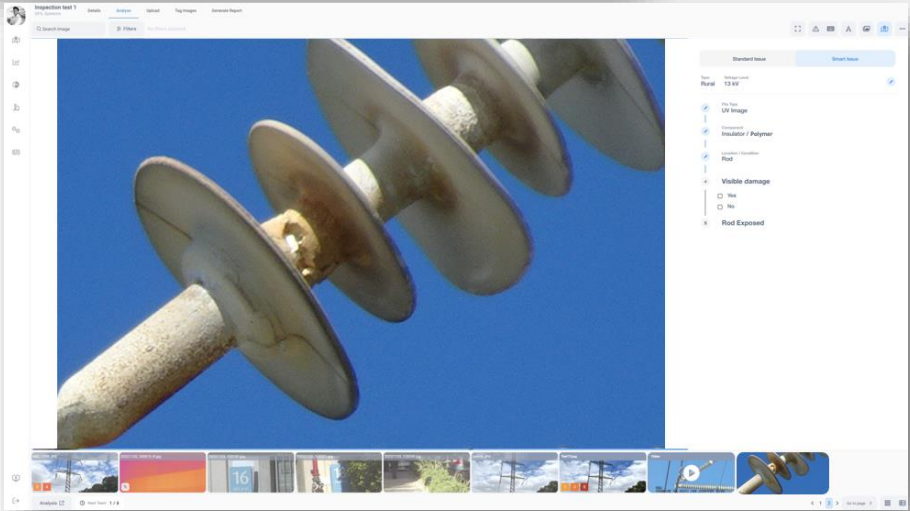
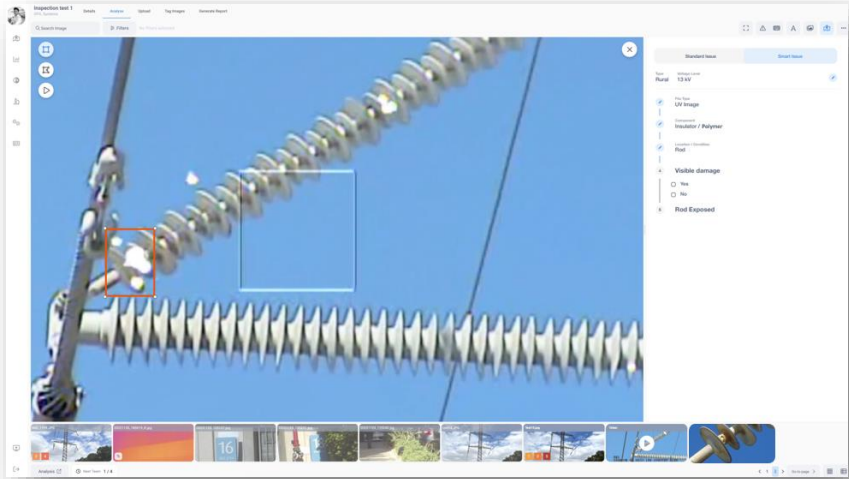
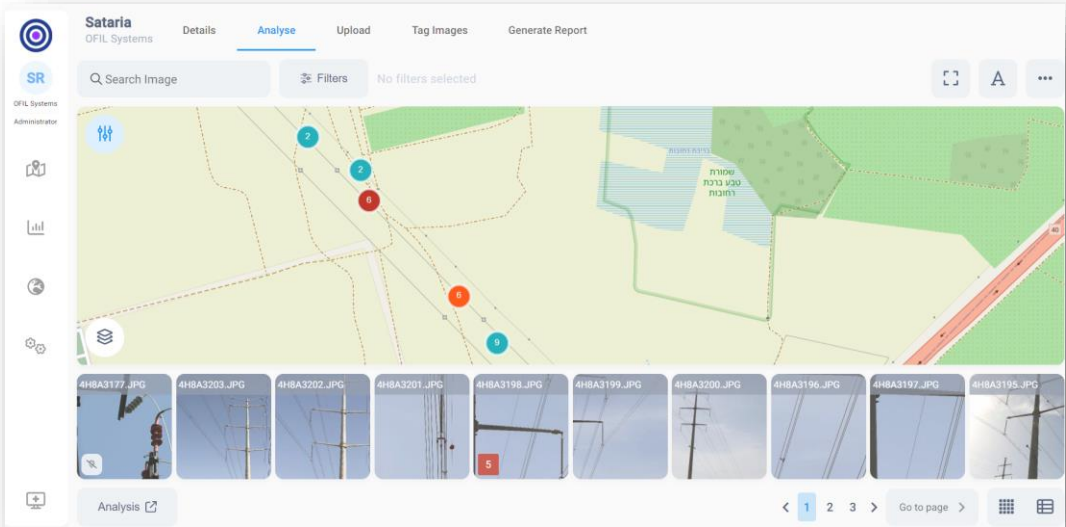
Efficiently manage historical data and enhance communication with sharing and reporting capabilities



### Expert Advice & Diagnostics

Backed by years of industry knowledge, receive expert advice and diagnostics to solve problems faster

# PRISM – Advanced Diagnostics, Intelligent Decisions



# Airborne Inspection Market

## Products:

- **ROM** – full-sized gimbal. Fits up to five sensors
- **ROMlite**- lightweight gimbal for small helicopters.
- **ROM Ultra** – Multispectral 5-sensor professional gimbal



Incorporating large variety of sensors in the UV, infrared, Visible and laser spectral bands at the highest resolutions available

- Ofil Airborne is the only developer of Gyrostabilized Multi-sensor Gimbals for airborne powerline inspections
- Highest inspection efficiency based on leading edge system architecture + precisely selected sensor packages + ease of use integration & system control
- Highest measurement precision & data quality to find, store and judge all the powerline faults within one single flight (per route) performing multispectral inspections



# EV Motors



- With the emergence of the EV market, a fast-paced engine development is conducted by all automotive companies, and a great deal of third-party manufacturers.
- The design trends for improving EV motor performance present certain challenges, particularly concerning PD, influenced by:
  - Voltage levels: Increasingly high voltages.
  - Design complexities: More intricate geometrical configurations.
  - Material constraints: the goal of reducing the content of rare earth elements in motors, is adding more challenges.
- Ofil has successfully penetrated this market, as the corona camera is an invaluable tool to locate the limits of new motor designs.
- Additionally, there are current discussions with market leading companies to integrate Ofil's technology in the inline QA process.

# Thank you

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