
SOLARDRONE
Detect, Clean & Optimize Energy Efficiency
Get Started
→

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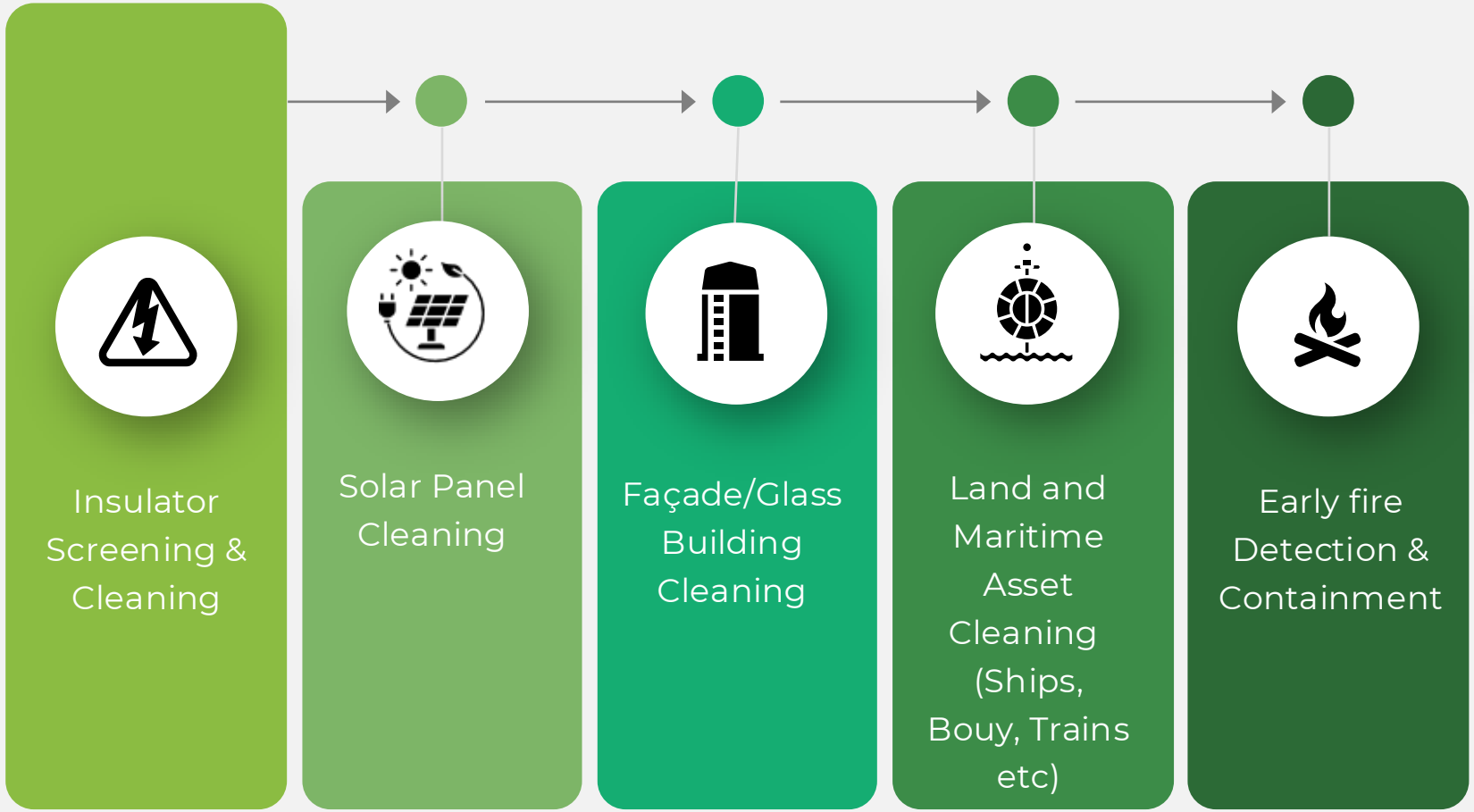
Solar Drone's Solution Use-Cases



THE CHALLENGE

High-voltage transmission lines rely on ceramic or polymer insulators to keep live conductors isolated. In dusty or coastal regions, these insulators become contaminated, leading to **corona discharge, flashover, fires, and damage to grid infrastructure.**

POWER DRONE

Our Innovative 3-in-1 Transmission Solution

Solar Drone's holistic approach combines 3 tasks into a single drone flight solution, providing utilities with a clear path to improved safety, lower costs, and higher reliability.

1

Real-Time Screening
UV-sensitive corona camera detects partial discharges instantly.

2

Predictive Maintenance
Integrated insights extend asset life and prevent outages.

3

Precision Cleaning
High-pressure washing up to 100 bar for safe, efficient removal.

POWERDRONE

Software: Grid Reliability Through Image Intelligence

Multi-sensor Technologies Including UV, RGB And Thermal, Converts Complex Imagery Data And Delivers Actionable Insights For Efficient Asset Health Management.

Early Fault Detection:

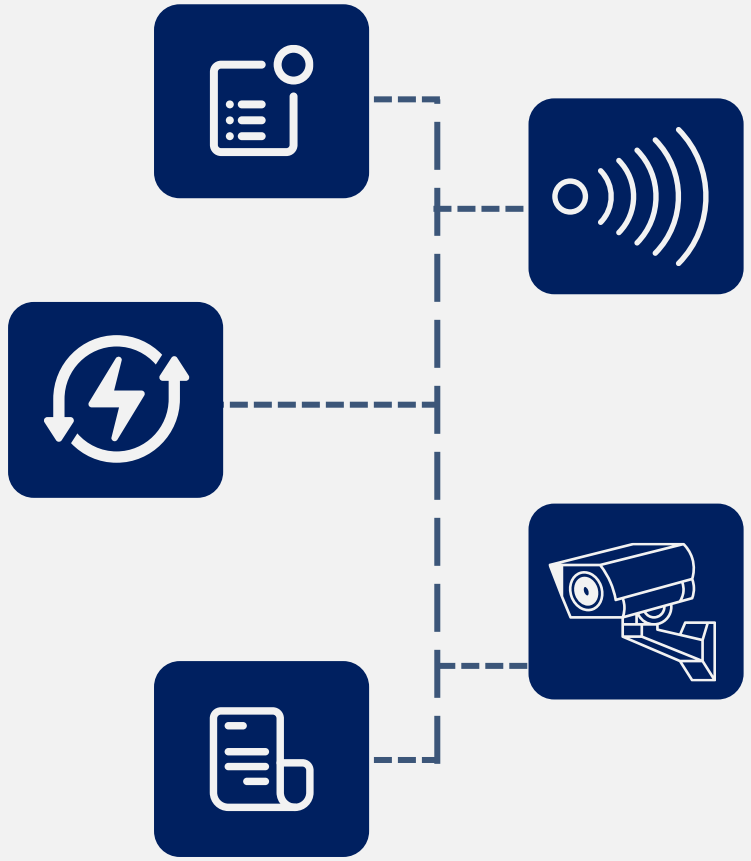
Proactively identifies PD-related issues, preventing costly outages and extending the lifespan of electrical assets

Operational Efficiency:

Enables predictive maintenance, reducing downtime and lowering overall maintenance costs

Data-Driven Insights:

AI-powered analytics provide clear, quantitative severity scores for optimized asset management



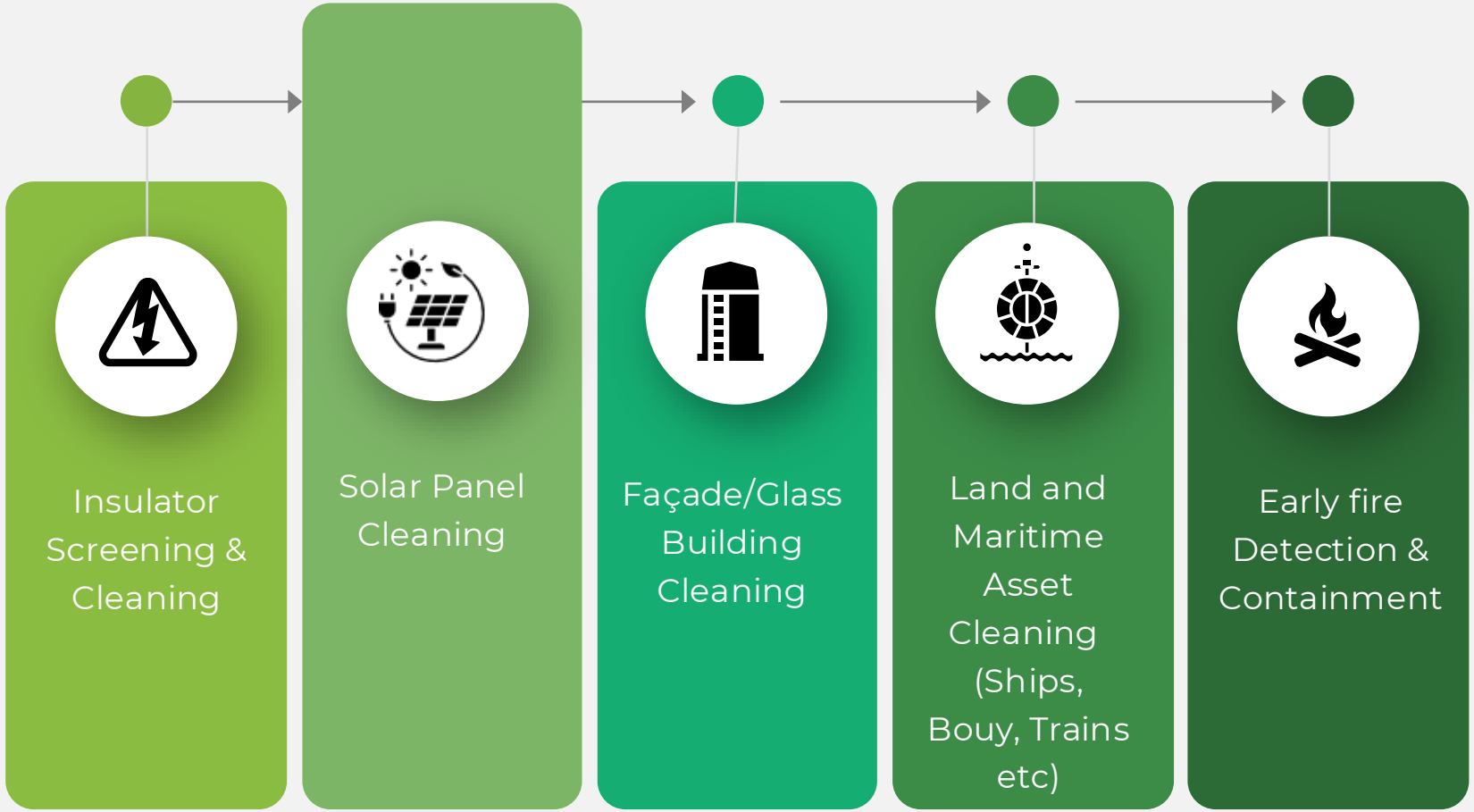
Multi-sensor Integration:

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

Solar-Blind UV Technology

Precise and real-time detection of corona partial discharges

Solar Drone's Solution Use-Cases



The Challenge

- Up to 30% energy loss due to poor maintenance and dirt accumulation.
- Challenges in reaching and maintaining solar fields in tough terrains.
- Panels are cleaned manually or with expensive mounted systems that are labor-intensive, water-consuming, and restricted in reach.

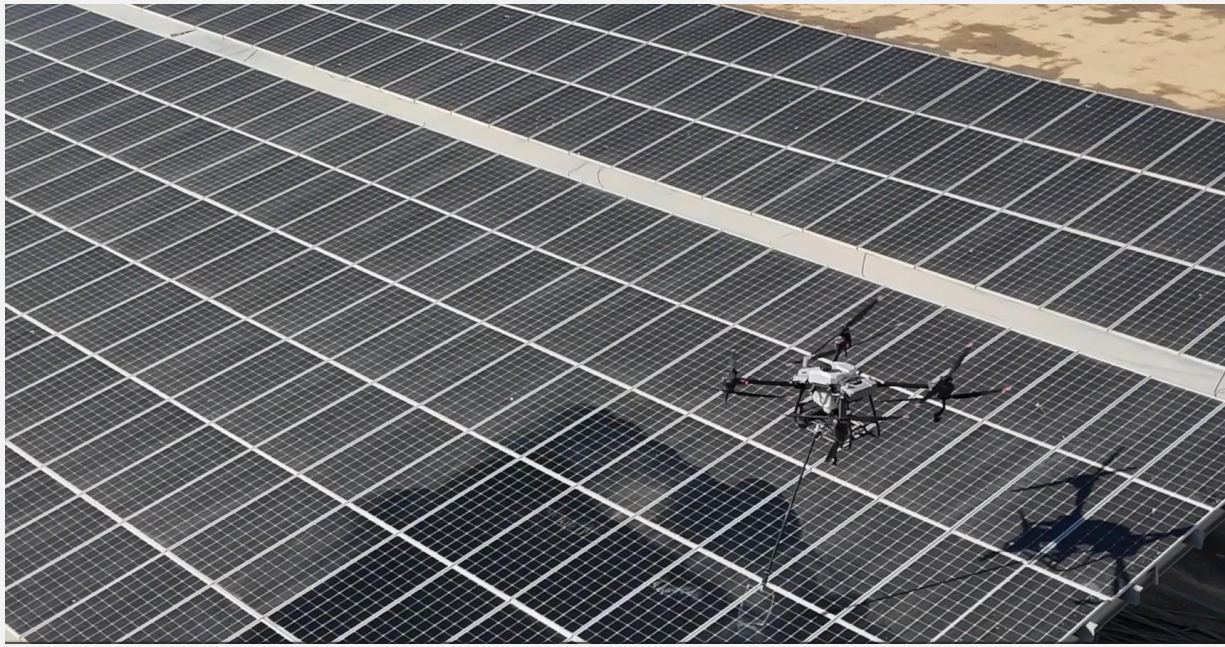
SOLARDRONE

Our drone executes targeted, low-water, high-pressure cleaning of solar panels.

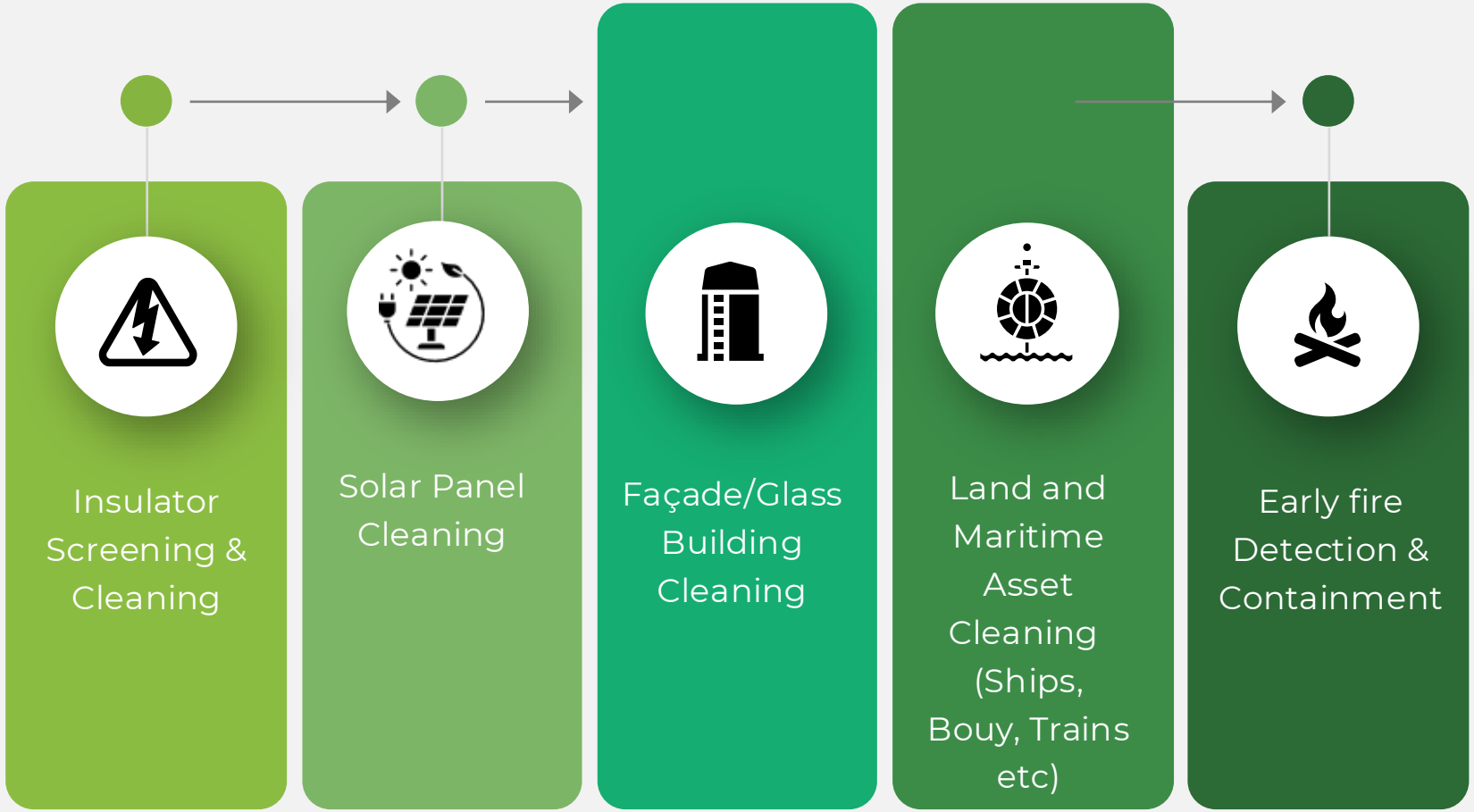
Optimized cleaning angle, water pressure and EU-approved, green detergents if needed.

Advantages

- Optimizing energy yield
- Ensuring sustainable, large-scale solar operations
- Reduced operating expense
- Safety to operator
- Adapted to desert ops (low water consumption)
- Reach any location (floating or remote PVs)
- Case Study: proven increase of 53.85% energy yield after cleaning with our payload

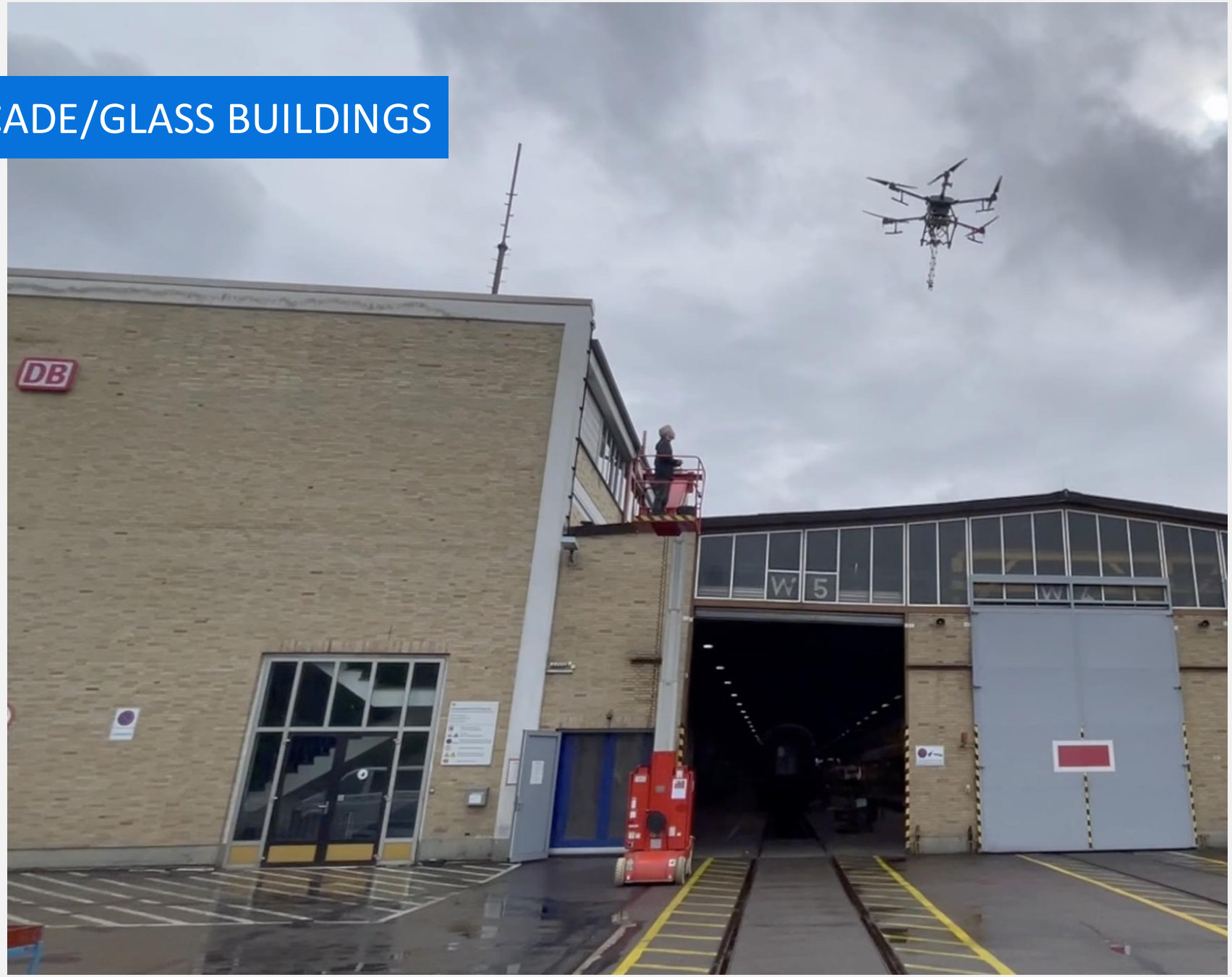


Solar Drone's Solution Use-Cases



CLEANING DRONE

MAXIMUM CLEANING FOR FAÇADE/GLASS BUILDINGS



CLEANINGDRONE

MAXIMUM CLEANING FOR LAND AND MARITIME ASSETS

CLEANINGDRONE

Outsourced fuel station, terminal, signage, and façade cleaning to contractors using heavy lifts and scaffolding, raising costs, safety risks, and operational disruptions.

Our drone delivers safe, efficient, and flexible cleaning through a unique high-pressure payload system.

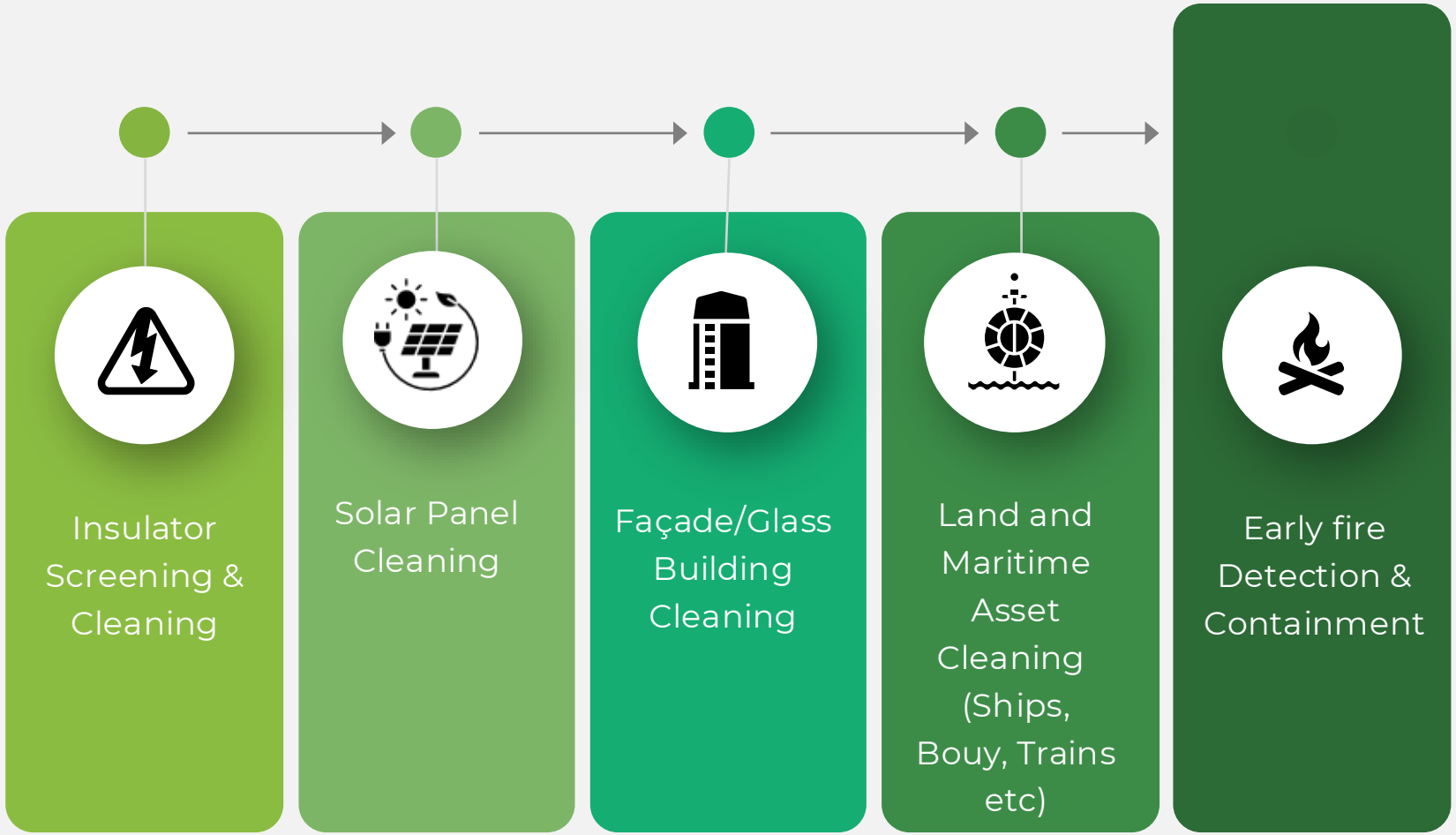
45% **HIGHER CAPACITY**

45% **FASTER**

54% **TOTAL COST SAVED**

In comparison to Industrial Cleaners.
Successful PoC with Deutsche Bahn, German national railway system.

Solar Drone's Solution Use-Cases



SOLARDRONE

THE CHALLENGE

Legacy practices are limited in reach and scope and endanger operators' lives:

- Ground Crews: Hand tools, chainsaws, firebreaks; labor-intensive, slow in rough terrain.
- Aerial Drops: Helicopters/tankers drop water or retardant; limited by smoke/weather. Dangerous to pilots.
- Fire Engines: Pump water/foam on urban-wildland edges; effective early but fuel-limited.
- Controlled Burns: Preemptive fuel reduction; risky, needs ideal conditions.

Global Wildfires (2019–2024)

- Damage: $150–200B/year avg.
- Lives: 500–1,000 direct deaths/year; 5–7K total incl. smoke.
- Area: 500–600M ha burned/year.

Global Forecast (2025–2050)

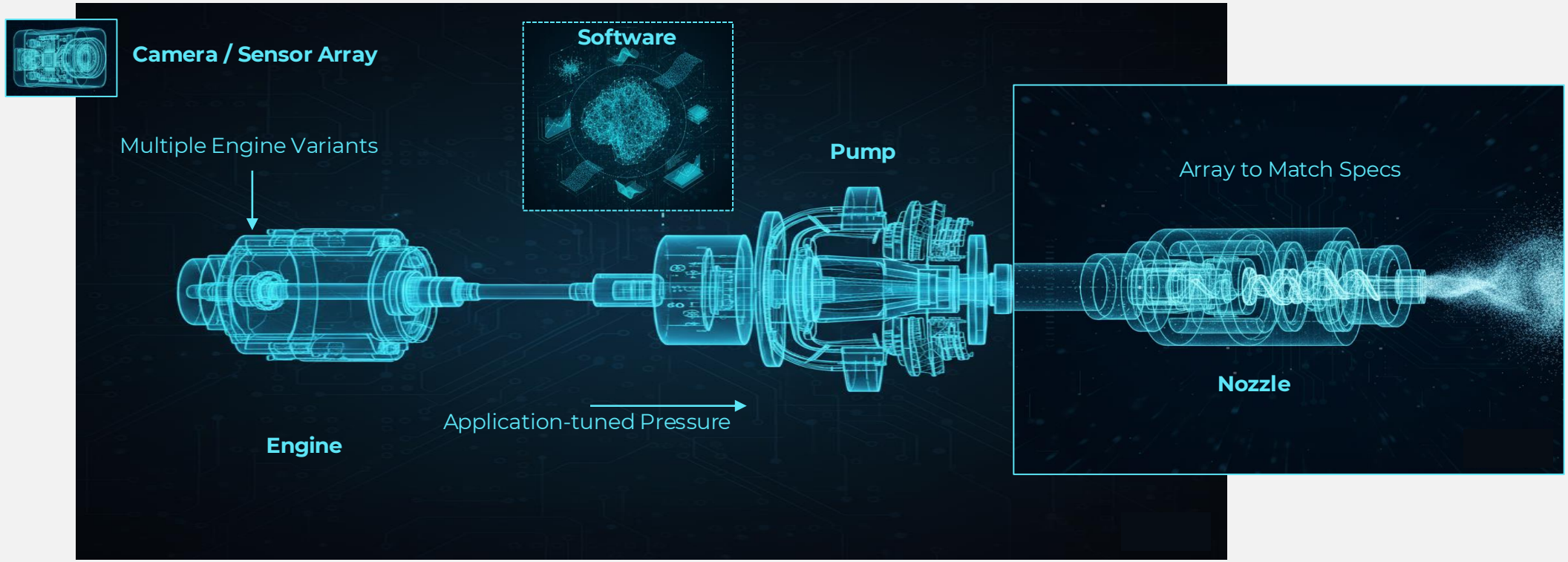
+30–50% fire risk; $300B+/year by 2040.

FIREDRONE

- High-pressure water or foam dispersion at up to 20 bar enables the drone to suppress fires quickly and safely, even in hard-to-reach areas.
- Ideal for industrial facilities, energy sites, and remote terrain operations.
- Fire-extinguishing balls deployment.
- Spraying 40 liters of fire-retardant material.
- Drones can be refilled in under 2 minutes and redeployed repeatedly.

IN HOUSE IP DEVELOPMENT

ENGINEERED FOR PRECISION: A WORLD OF POSSIBILITIES UNLOCKED

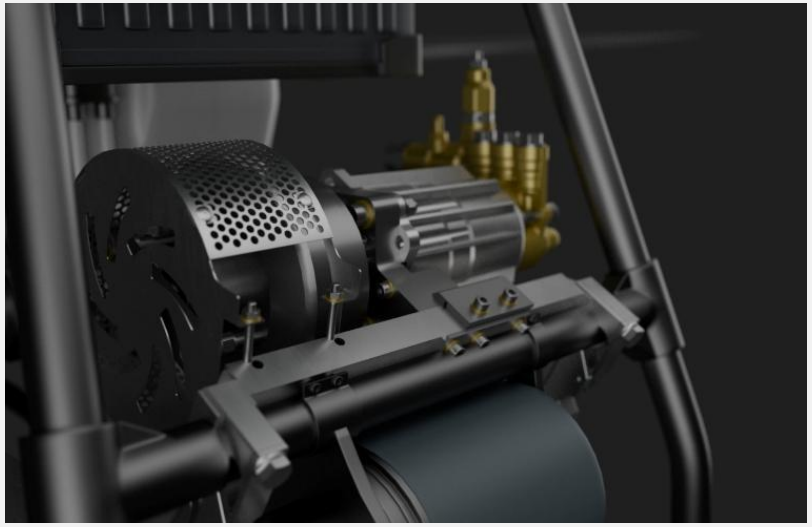


Highly adaptable system by configuring and fine-tuning six key elements: pump pressure, nozzle build, detergent usage, engine power, approach angle, and software.
Precise control over the force, mobility, and interaction of the water jet for a wide range of applications.

SOLARDRONE

IN HOUSE IP DEVELOPMENT

A UNIQUELY ENGINEERED PAYLOAD



Smart Detection: Our AI-powered cameras use both visible and UV light to precisely identify and target dirt, dust, and corrosion.

Adaptable Power: Choose between a self-contained, independent power and water supply for mobile jobs or a ground-fed system for continuous operation.

Customized Cleaning: Use plain water, specialized detergents, or chemical mixtures to tackle any cleaning challenge.

Extreme Cleaning Power: A high-pressure jet delivers up to 120 bar (1,740 PSI) of force to blast away stubborn grime.

Unique Airborne Pump: We're the only system with a powerful 4,500-watt airborne pump for unmatched performance.

Precision Targeting: Smart control modules and configurable turbo-jet nozzles ensure highly accurate and efficient cleaning.

High Efficiency: A low flow rate of 5-8 liters per minute lets you clean up to 100 square meters per tank.

Seamless Integration: Our system is compatible with a wide range of drones, including the popular DJI Agras series.

Worldwide Activity

Israel

Ongoing R&D as well as PV maintenance activities in Israel, leveraging local expertise and innovation.

Germany

Successful PoC with Deutsche Bahn demonstrates technology deployment and traction in the German market.

Italy

The company has been carrying out multiple maintenance activities across Italy, signaling an expanding operational footprint.

USA

SolarDrone recently acquired by the American company VisionWave, anchors the company's presence in the United States.

SOLARDRONE

Our Customers

ENERGIX RENEWABLES

Nofar

DB

Our Partners

VISIONWAVE

UNMANNED4YOU

PROPELLER DRONES

Thank You!

SOLARDRONE

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