

# CASE STUDY

## Precision at Scale: The Galventus Case Study

### ABOUT US

**Perceptual Robotics** is a UK based technology company, focused on drone automation and AI services in the field of Wind Turbine Blade Management. Our services cover from field inspection to data processing and repair management portal.

Our **Dhalion system** has inspected and processed **thousands of turbines** worldwide.

### FIGURES

- **500+** inspections per year across multiple wind farms
- **15 inspections** completed in a single day is their performance record
- **6-month inspection campaigns completed on schedule**
- Significant **time saved** in both inspection and reporting workflows

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### OVERVIEW

Delivering nearly **500 blade inspections a year** requires precision, speed, and consistency.

For **Galventus**, one of Spain's leading independent service providers for blade inspections and repairs, keeping turbines performing at their best meant finding a smarter way to handle volume without sacrificing quality.

### ABOUT THEM

**Galventus, based in Galicia**, specialises in wind turbine blade inspection, maintenance, and repair, serving operators across Spain and beyond.

Their team of experienced technicians and engineers plays a critical role in ensuring fleet reliability and extending asset life, managing long inspection campaigns with tight schedules and demanding client expectations.

### CHALLENGES



Manual inspections and reporting processes were time-intensive and prone to inconsistencies.



Reviewing thousands of images, building reports manually, and maintaining accuracy across large campaigns strained the team's resources.



## HOW

Galventus adopted in 2022 the **Dhalion autonomous drone system** and its **AI-powered analysis portal**.

The drone now captures **high-definition imagery automatically**, while the online platform streamlines image review, damage validation, and reporting, all in one place.

## RESULTS

- ⚙️ **Faster inspections** with automated flight paths
- 🕒 **Reduced** on-site and post-processing **time**
- 📊 **Better data accuracy** and repair prioritisation
- 📅 **More efficient campaign planning** & execution
- 🛠️ **Enhanced confidence** in blade condition assessments

Number of  
**500+**  
inspections per  
year

WTG  
**15**  
a day

## TRANSFORMATION

*“The images have a better quality and definition, and that led to a more accurate identification of potential damages,”* says Lucía Fernández, Senior Blade Specialist.

*“We’re saving time across the entire process, especially during inspections.”*

01

### Initial Adoption

Moved from manual drone inspections to a Dot with 1 pilot.

02

### AI Adaptation

The AI model was trained to detect and categorise the way they would.

03

### Custom Exports

Created for the needs of different clients to save time.

04

### Portal Reports

Portal was fine tuned to help them better manage their Report volume.



### Solution

- Dhalion Dot system
- DJI M300
- Since 2022



### Solution

- AI Model for detection specially trained
- Galventus' Blade Experts
- Special Export Format

## CONCLUSIONS

Galventus has elevated their inspection workflow: achieving **faster turnarounds**, **greater accuracy**, and **improved decision-making** across operations.

With Dhalion's automation and AI-driven insights, the team now delivers the **same trusted quality at a new scale of speed and precision**, proving that technology can amplify expertise, not replace it.