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Make Your Next Inspection A Breeze



Autonomous Drone Solution for Wind Power Inspection



Korea | United States | Germany | Brazil

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NEARTHLAB

A Leading Global Provider of Autonomous Flight Drone Solutions

Approach

Nearthlab is a leading company that has successfully commercialized drone solutions, leveraging proprietary technology developed in Korea. We set new benchmarks in the drone industry by seamlessly integrating cutting-

edge innovations. Powered by our proprietary AI flight technology, we deliver tailored solutions

Powered by our proprietary Al flight technology, we deliver tailored solutions across diverse industries.





Beyond Level 4 Vision Al Autonomous Flight



80% of Total Revenue Occurs Overseas

Industry

Nearthlab redefines industry standards in public safety, defense, inspections, and infrastructure management through proprietary drone engineering, advanced flight algorithms, and a robust data platform. Beyond technology, we drive efficiency, safety, and sustainability with impactful solutions.







Public Safety & Physical Security Defense Domestic and International Defense & Enterprise Sectors Infrastructure Inspection Autonomous Inspectior for Critical Facilities

CES

Achievements

- 2025 Edison Awards 2025 iR52 Jang Young-Sil Science and Technology Award 2025 CES 2025 Best of Innovation Award iF DESIGN AWARD 2025
- 2024 Winner of the Robotics and Aerial Integration for Defense Challenge, hosted by Korea's Ministry of Defense World Economic Forum 2024 Technology Pioneer Red Dot Design Award 2024 Fast Company's Most Innovative Companies in Robotics



- 2023 Secured three projects from the Defense Acquisition Program Administration (DAPA) Forbes Asia 100 To Watch 2023 Microsoft Growth X Accelerator
- 2022 Gold Medal in the International AI Competition (Google's Kaggle) CES 2022 Innovation Award Recipient of the Minister's Award for Leadership in Drone Industry Innovation from Korea's Ministry of Land, Infrastructure and Transport (MLIT)

onomic Forbes Growth Google kaggle

Key Partners

Nearthlab expands its presence with long-term partnerships to drive innovation. We continuously enhance technology and create industry-wide value by collaborating with leading corporations and institutions.

대한민국 국방부 Kinisty of National Defense	EDGE	HYUI	ואסר	ONAES	SoftBank
Vestas	ONXX		epco	RWE	LIG Nex1
Deutsche Windtechnik	SIEMENS	Gamesa	VATTE	NFALL 🗕	INNERGEX
	👌 Eurus I	Energy		ORTHLAND	⊘ Hanwha Systems

NEARTHLAB Wind Turbine Inspection Business

NEARTHLAB's Approach to Wind Turbine Inspection

Nearthlab's wind turbine inspection team specializes in autonomous drone inspection technologies tailored for wind turbines, with expertise rooted in Al-driven flight control and high-resolution visual analytics. The company focuses on enhancing the operational efficiency, safety, and longevity of wind assets through precise, automated inspections, providing a next-generation approach to turbine maintenance for both onshore and offshore wind farms around the world.



SIEMENS Gamesa CHNP GE Renew SoftBank

Vestas ¿Eurus Energy X Deutsche Windtechnik NORTHL

▲ 90% Customer **Renewal Rates**

30+ Countries **Global Presence** in EU, NA, LATAM, and APAC

HQ in Korea

RWF

VATTENFALL

0

with Overseas Branches

NEARTHLAB's Comprehensive Wind Turbine Inspection Solution

Full-Stack Wind Inspection Suite

From flight to insight, every step is streamlined to maximize efficiency, precision, and scalability-no specialized hardware is required. Designed to serve both professional teams and field operators, it adapts to any workflow with ease.

			Comprehensive Wind Turbine Inspection			ion
1	Manual Operation		NEARTHWIND		zoomable	
	Rope Access	Manually Piloted Drone	Pro Autonomous	Mobile Plug-and-Play	Al Data Mar & Analysis	nagement Platform
			Inspection brone	MODile App	- inter	ME OTHERS D
Safety	Low	Mid.	High	Mid.	TE	Pro
Time	Long 1-2 turbines/day	Mid. 4-5 turbines/day	Short 20+ turbines/day	Short Usage-dependent		Mobile
Cost	Mid High	High	Low	Lowest		
Image Precision	Low Limited Angle	Mid. Limited Angle, Average 20-40 MP	High Max. 61 MP	Mid. Payload-dependent		zoomable

Full-Scope Wind Turbine Inspection Coverage

Comprehensive inspection capabilities for both onshore and offshore wind farms. Whether it's surface defects or deep-chamber conditions, Nearthlab's technology delivers complete visibility across your entire fleet. Engineered for flexibility, the solution supports all turbine environments without compromising safety or speed.



Full-Sync Technology for Flight and Analysis Excellence

Nearthlab's inspection drones operate at the highest autonomy tier achievable in real-world field conditions-Level 4. By fusing LiDAR-based spatial mapping with Al-driven flight control and data analytics, our drones execute missioncritical inspections without pilot intervention, even in dynamic environments. This high-level automation eliminates human-related risks while delivering unmatched precision, faster insights, and rock-solid operational stability.



LiDAR based Al based

Why NEARTHLAB? Smarter Safety, Faster Insights, Stronger Assets

Nearthlab delivers autonomous inspection solutions that drive smarter operations and accelerate the future of wind energy. Powered by Al and robotics, our technology reduces risk, enhances performance, and unlocks long-term value.



- Fully autonomous operations eliminate human risk and maximize safety
- · 95% faster inspections and up to 20% reduction in maintenance costs
- Inspection reports delivered within 10 days
- Inverse-Y positioning eliminates blade rotation. saving time and complexity
- · Repair actions accelerated by 40% for minimal downtime



- Advanced flight control system ensures precision navigation and stability
 - High-resolution imaging captures micro-defects mall as 1 mm
 - Al-powered analytics detect defects with 99% accuracy

NEARTHWIND Pro

Autonomous Wind Turbine Inspection Drone



NearthWIND PRO is an Autonomous Wind Turbine Inspection Drone powered by vision AI, designed to capture high-resolution data along blade edges for precise and efficient safety inspections with minimal manpower. By enhancing safety while reducing inspection downtime, NearthWIND PRO im-

proves workplace safety and operational efficiency. Its customizable configuration enables optimal inspections across diverse indus-

tries.





15 min. Inspection Time per Turbine



Below 1 mm Defect Detection Capability

All-in-One Blade-to-Base Inspection

A single autonomous flight captures the entire turbine-from blade tips to base components-reducing downtime and simplifying logistics.



Precision Flight, Reliable Data

Al ensures stable proximity and ultra-sharp 61 MP imaging for consistent, high-quality defect detection.



Onshore to Offshore, One Drone

Built to operate seamlessly across diverse wind farm environments-on land and at sea-powered by robust flight stability and Nearthlab's deep expertise in safety validation and field operations.



Flexible Options for Clients

	Turnkey Solution	Flexible Leasing	Drone Purchase
Equipment Availability	0	0	0
Training Provided	0	0	0
Pilot Support	0	\otimes	\otimes
Prompt Inspection	0	0	0



NEARTHWIND Mobile

Subscription-based Wind Turbine Inspection Mobile App



NearthWIND Mobile is a Subscription-based Wind Turbine Inspection Mobile app that transforms commercial drones into automated facility inspection tools, powered by deep learning AI and autonomous flight. It is a highly scalable solution that can be integrated with off-the-shelf commercial drones. By reducing reliance on costly specialized equipment, it lowers operational costs

and features an intuitive interface for seamless operation.





No Drone? No Problem

Unlock fully autonomous inspections using your existing commercial drone-no need for costly industrial equipment. With simple drone training, your team will be equipped with your own inspection solution.

Unlimited Inspections, One Download

A single app installation gives you full access to Nearthlab's deep-learning AI, enabling unlimited inspections with no extra fee.



The Most Cost-efficient Inspection Solution

With low hardware requirements and zero pilot outsourcing, NearthWIND Mobile delivers industry-grade results at a fraction of the cost.



Get IT ON Google Play

NearthWIND Mobile Subscription Plan

3 Steps to Smart, Scalable Wind Inspections

1	2	3
Download & Setup	Inspection Flight	Data Management
Download the NearthWIND Mobile app and connect it to your compatible drone - no additional hardware required.	With a few taps, your drone will autonomously perform a complete blade inspection, guided by AI and preloaded flight logic.	Upload inspection data and metadata to Zoomable for automatic defect analysis, reporting, and full lifecycle tracking.
NearthWind M 2.0.1 Preade oper this page on your Android device! Demosit 2.01		zoomable [®] 200



patible with several versions of the DJI Mavic series

Comprehensive Add-On Modules

Inspection Options for Total Safety



Internal Blade Inspection Solution

Nearthlab's Internal Blade Inspection Solution allows customers to gain insight on the condition inside of the turbine chambers using Nearthlab's in-house designed and manufactured rover. Equipped with a 360-degree camera, the rover can navigate deep within the blade and identify hidden damages that could otherwise go unnoticed.







Zoomable Sample Report

LPS (Lighting Protection System) Inspection Solution

Nearthlab's LPS Inspection Solution is a contactless drone inspection method that involves the installation of high voltage generator at the hub and inspections using drones equipped with an electro-magnetic field sensor. Once installed, the drone will inspect the LPS lines along the leading edge of all three blades of the turbine.



LPS Inspection Reading Analysis - Success vs Defect

As the drone travels farther down the blade(R-value), an electromagnetic reading that depicts a sudden drop in voltage strengths signifies that there is a disconnected point in the LPS line at the specific location from the root.



Offshore Wind Turbine Inspection Solution

Nearthlab delivers precision inspection across every critical component of both onshore and offshore wind turbines. From blade surfaces and internal chambers to transition pieces, jacket foundations, and offshore substations-our proven technology ensures accurate diagnostics even in the most remote and complex environments. This end-to-end capability gives operators total visibility and control throughout the entire wind asset lifecycle.



Flexible Options for Clients

	Turnkey Solution	Flexible Leasing	Drone Purchase
Equipment Availability	0	0	0
Training Provided	•	0	0
Pilot Support	0	\otimes	\otimes
Prompt Inspection	0	0	0

zoomable[™]

Al Data Management & Analysis Platform



Zoomable is a Data Management Platform that automates data analysis with Al, maximizing inspection accuracy and efficiency.

Zoomable supports data management for wind turbines, energy facilities, and industrial infrastructure, enabling comprehensive oversight from individual assets to large-scale sites. Al processes millimeter-level defect detection and automated image alignment. By evaluating risk levels, prioritizing actions, and producing detailed reports, Zoomable ensures a structured and efficient maintenance process.

Zoomable Features

Zoomable revolutionizes wind farm management by transforming safety inspections and defect analysis into actionable insights, empowering operators to make faster, smarter decisions for enhanced efficiency and safety.





Smart Capture, Intelligent Analysis, Rapid Reporting



Customer Testimonials

