

HORIZON-CL5-2026-02-D3-07: Industrial partners sought to join a proposal for the development of new innovative solutions for wind maintenance.

Summary

Profile type	Company's country	POD reference
Research & Development Request	Spain	RDRES20250917008
Profile status	Type of partnership	Targeted countries
PUBLISHED	Research and development cooperation agreement	• World
Contact Person	Term of validity	Last update
Enrico FRANZIN	17 Sep 2025 17 Sep 2026	17 Sep 2025

General Information

Short summary

A Spanish R&D institution is preparing a proposal for the upcoming call HORIZON-CL5-2026-02-D3-07 to develop a wind maintenance solution based on SHM, Digital Twin and robotics. The project seeks end-users whose activity is the maintenance of wind parks

Full description

The maintenance of offshore wind turbine blades presents significant challenges due to harsh environmental conditions, accessibility issues, and high operational costs. Traditional maintenance methods often involve manual inspections and repairs, which are time-consuming, risky, and expensive.

Current approaches—manual inspections, drones, and robotic repairs—are fragmented and lack full integration and no system yet combines real-time damage detection, targeted autonomous inspection, and automated repair in a unified workflow.

The initiative aims to develop a comprehensive, autonomous maintenance ecosystem that seamlessly integrates:

- In-situ Monitoring: Deploying sensors (e.g., piezoelectric transducers, strain gauges, accelerometers) on turbine blades to continuously monitor structural integrity and detect anomalies in real-time.
- Targeted Inspection: Utilizing autonomous drones equipped with advanced imaging technologies to conduct detailed inspections of identified problem areas, even while blades are in motion.

- Decision making: Data fusion and decision-making by fusing sensor and inspection data to guide intervention with ML and AI.
- Autonomous Repair: Employing crawler robots capable of performing precise repair tasks on turbine blades, reducing the need for human intervention and minimizing downtime.

Advantages and innovations

- Combines robotics innovation with digital twin and structural health monitoring
- Supports green energy (wind energy in this case)

Technical specification or expertise sought

Partners are sought with:

- Expertise in wind energy
- Expertise in wind energy maintenance
- End-user role
- Experience in Horizon Europe project implementation

Stage of development

Concept stage

Sustainable Development goals

- **Goal 7: Affordable and Clean Energy**
- **Goal 17: Partnerships to achieve the Goal**
- **Goal 11: Sustainable Cities and Communities**
- **Goal 13: Climate Action**
- **Goal 9: Industry, Innovation and Infrastructure**

IPR Status

Secret know-how

IPR Notes

Partner Sought

Expected role of the partner

Seeking industrial or academic partners with capabilities to:

- Develop simulation platforms
- Contribute to system-level integration of digital autonomy in launchers
- Provide feedback for design iteration, qualification pathways and launch requirements

Type of partnership

Research and development cooperation agreement

Type and size of the partner

- **SME <=10**
- **Big company**
- **Other**
- **SME 50 - 249**
- **SME 11-49**

Call Details

Framework program

Horizon Europe

Call title and identifier

CL5-2026-02-D3-07

Submission and evaluation scheme

Anticipated project budget

Coordinator required

Yes

Deadline for EoI

31 Dec 2025

Deadline of the call

16 Feb 2026

Project duration in weeks

Web link to the call

<https://ec.europa.eu/info/funding-tenders/opportunities/portal/screen/opportunities/topic-details/horizon-cl5-2026-02-d3-07>

Project title and acronym

Dissemination

Technology keywords

Market keywords

- **06003003 - Wind energy**

Targeted countries

Sector groups involved

- **World**