

# TALOS

## A.Bri.ghter future

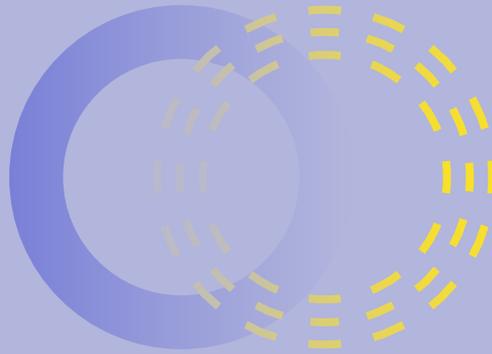


Funded by  
the European Union

# TALOS

harnesses **cutting-edge robotic solutions and artificial intelligence** for optimized operations and maintenance (O&M) in photovoltaic (PV) plants, **fostering human-robot collaboration.**

This integration enhances **safety, efficiency, and cost-effectiveness** in energy production across land-based, floating, and agricultural PV sectors.



TALOS integrates the **human-in-the-loop** concept, focusing on human-robot interaction within its innovative solutions, ensuring human aspects guide the development through end-user engagement and social impact analysis.

# Robotic & AI Innovations for PV Efficiency



Human-robot collaboration with multi-agent environments.



Validated digital twins of TALOS PV parks to enhance O&M decision-making.



AI to early detect PV panel defects and optimize O&M strategies.



Drone inspection data for AI-driven fault classification.



Autonomous O&M robots for land-based and floating PV.



Advanced agricultural monitoring with AI and autonomous vehicles.

## Reduction of

**10%**

Underperformance

**>70%**

Maintenance period

**90%**

Human risk exposure

---

## Improving of

**10%**

Resource efficiency in O&M tasks



# AgriPV Pilot

In the Netherlands, TALOS brings robotics to agriculture, merging PV energy production with crop cultivation for a greener future.

A wide-angle photograph of a solar farm at sunset. The sun is low on the horizon, casting a warm orange and yellow glow across the sky and the solar panels. The solar panels are arranged in neat rows, stretching into the distance. In the background, there are rolling hills and a forest. A blue semi-transparent rectangle is overlaid on the center of the image, containing text.

# Land-based Pilot

In Spain, autonomous robots and AI enhance land-based PV efficiency, pioneering sustainable energy production.

An aerial photograph of a vast floating solar farm. The solar panels are arranged in a dense, grid-like pattern on a body of water. A small, white, autonomous cleaning robot is visible in the lower right quadrant, moving across the panels. The robot has a circular pattern of sensors or lights around it. The water is a deep blue-green color. The sky is a clear, light blue. A semi-transparent purple rectangle is overlaid on the top left portion of the image, containing the title and text.

# Floating Pilot

In Portugal, autonomous cleaning and inspection robots revolutionise floating PV parks, showcasing innovation on water.



Follow us on  
social media:



TALOS EU PROJECT

Visit our website:  
[talosproject.eu](https://talosproject.eu)

Contact us at:  
[info@talosproject.eu](mailto:info@talosproject.eu)

## The TALOS consortium:

NEW .....



INESCTEC

DTA THE SMART MOVE

SolarCleano

FundingBox

ICONS

Isotrol

alisyS

res  
power for good

WAGENINGEN  
UNIVERSITY & RESEARCH



Eden  
Coze

ΓΕΩΠΟΝΙΟ ΠΑΝΕΠΙΣΤΗΜΙΟ ΑΘΗΝΩΝ  
AGRICULTURAL UNIVERSITY OF ATHENS