TALOS

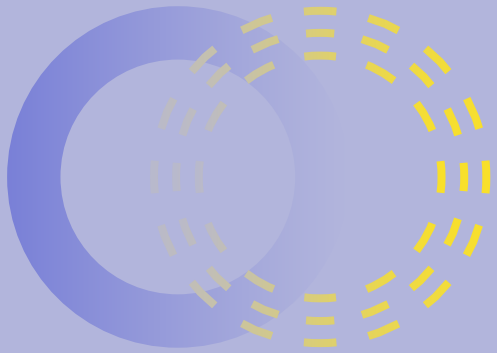
A.Bri.ghter future

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.

Land-based Pilot

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

Floating Pilot

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

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