



Artificial Intelligence for Operation and Maintenance of PV Plants



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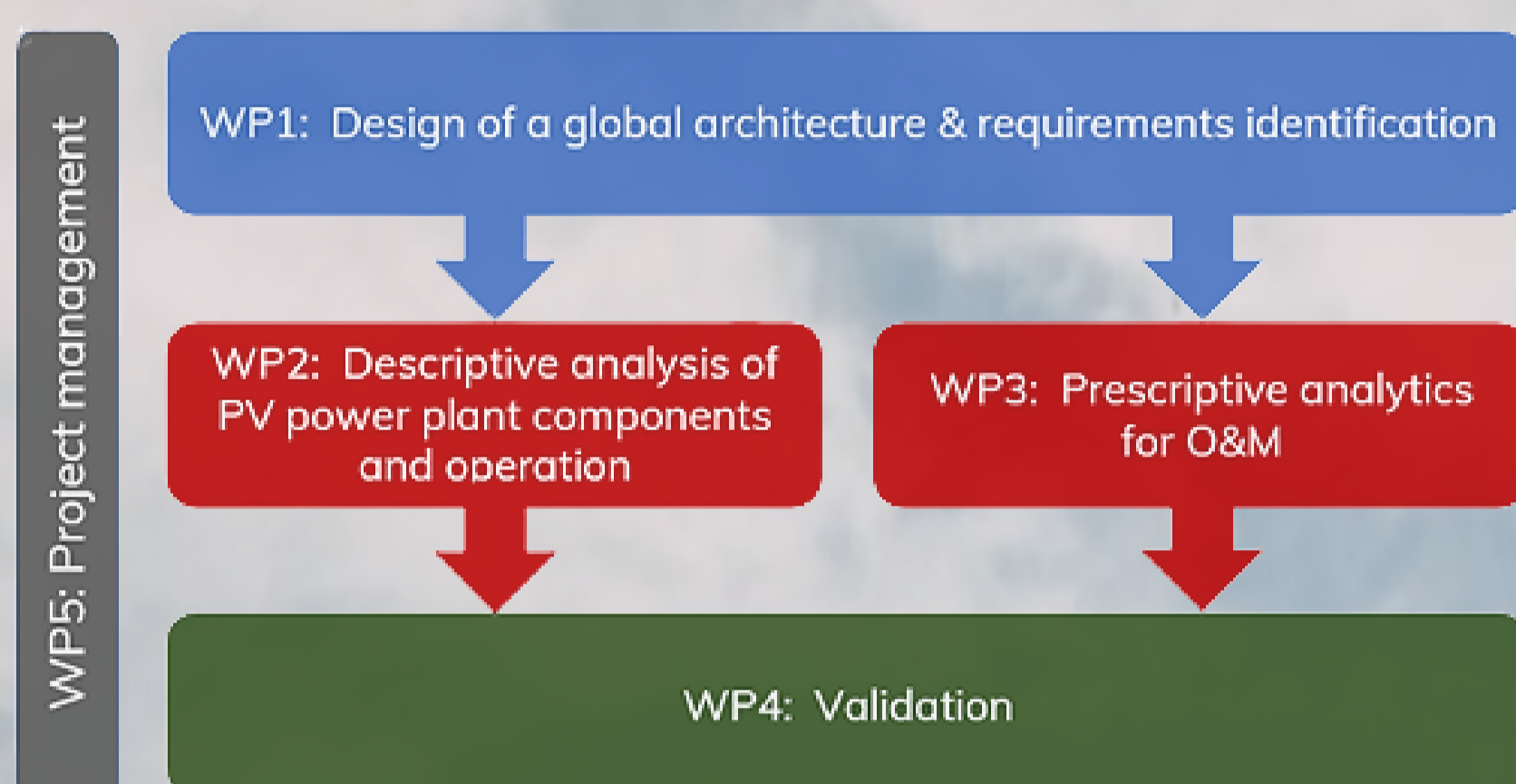


Description

This **24-month project** (July 2021-June 2023) with a total budget of **813 thousands euros**, will develop **AI-based tools and Digital Twin** to enhance **O&M in PV parks**, thus reducing costs and increasing plant reliability and availability.



Structure



Objectives

- Specific objective 1** – Increasing PV Plant reliability through development and validation of models, simulation tools and AI-based data analysis for fault prediction and detection:
 - ❖**SO 1.1- Early fault detection tools** through advanced monitoring, automated data analysis and comparison with model-generated values.
 - ❖**SO 1.2 Predictive maintenance tools for increased reliability.**
- Specific objective 2** - Optimizing PV Plant generation performance:
 - ❖**SO 2.1 - Early degradation and underperformance detection tools.**
 - ❖**SO 2.2 - Root cause analysis for prescriptive maintenance tools.**



Results

The expected result of the Project is a set of tools for PV plant O&M and Asset Managers for:

- increasing the operational reliability and efficiency of PV plants:** high accuracy of early detection of faults and degradation problems and Optimization of O&M activities;
- enhance economic performance:** reduction of downtimes of elements, detection of underperformance problems that can affect the energy production.



Partners



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