



Cost reduction and enhanced performance of PV systems



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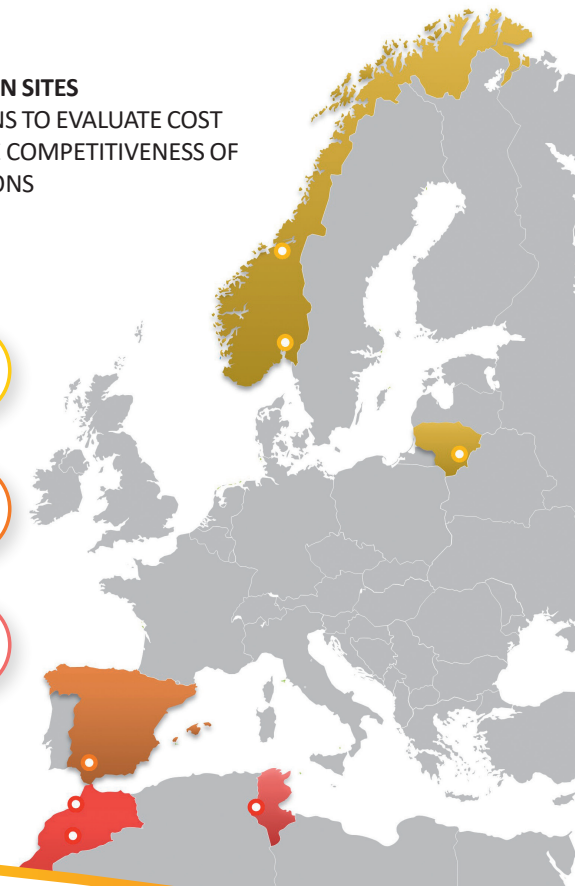

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Development of superior quality PV systems, based on a **hybrid** combination of technological innovations and business operation solutions, aiming to accelerate large scale deployment in Europe and help EU photovoltaic business to regain leadership on world market.




**DEMONSTRATION SITES**  
IN HARSH CLIMATE CONDITIONS TO EVALUATE COST EFFICIENCY AND DEMONSTRATE COMPETITIVENESS OF THE SOLUTIONS

Integration of innovations (multifunctional nanocoating, in-laminate bypass diode, advanced encapsulation for flexible PV modules and bifacial panels improvement) into state of the art PV module technologies .






Enhancing PV power electronics durability and efficiency by deploying technological advancements in module level power electronics and fault-tolerant converter topologies.



Innovative digital platform for Photovoltaic Information Management (PIM) based on Building Information Management (BIM) tools, ensuring integrated information flow through the PV value chain.

**EXPECTED REDUCTION OF LCOE**  
(LIFETIME COSTS/ENERGY PRODUCTION)  
**FOR PROPOSED INNOVATIONS**

PV Modules	 7 - 14 %	LCOE (life time costs/energy production) ↓
Power Electronics	 4 - 5 %	
System Integration, O&M	 12 - 18 %	
Industry 4.0 Internet of Things (IoT) Data Management Manufacturing	Additional Reduction	

Temperate (cold/wet) climate

- Norway: Oslo & Trondheim
- Lithuania: Vilnius



Tropical (hot/wet) climate

- Spain: Sevilla



Desert (hot/dry) climate

- Morocco: Ouarzazate & Rabat
- Tunisia: Tozeur



**DISSEMINATION OF RESULTS, TRAINING AND BUSINESS CASES DEVELOPMENT**

- Dissemination of scientific and commercial innovations developed and their associated benefits, facilitating market uptake.
- Practice oriented education, training and knowledge exchange carried out in the demonstration facilities.
- Viability study of realistic use scenarios for proposed PV systems to support the business development.

