

# Advancing Renewable Energy in the Adriatic Ionian Region through the Use of Digital Twins

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## OUTLINE

- THE GOTOTWIN Project objectives
- Market assessment
- Transnational perspectives for digital twin implementation
- GOTOTWIN architecture
- GOTOTWIN Ecosystem
- Project organization and management

## THE GOTOTWIN PROJECT

First call for proposals of the INTERREG IPA ADRION call  
[www.interreg-ipa-adrion.eu](http://www.interreg-ipa-adrion.eu)

**Title:** Advancing Renewable Energy in the Adriatic Ionian Region through the Use of Digital Twins

**Project duration:** 36 months

**Start date:** 01.09.2024

**End date:** 31.08.2027

**Total budget:** 1.709.812,0 EUR

## PARTNERSHIP

**LP1:** Faculty of Electrical Engineering and Information Technologies, North Macedonia

**PP2:** Jožef Stefan Institute, Slovenia

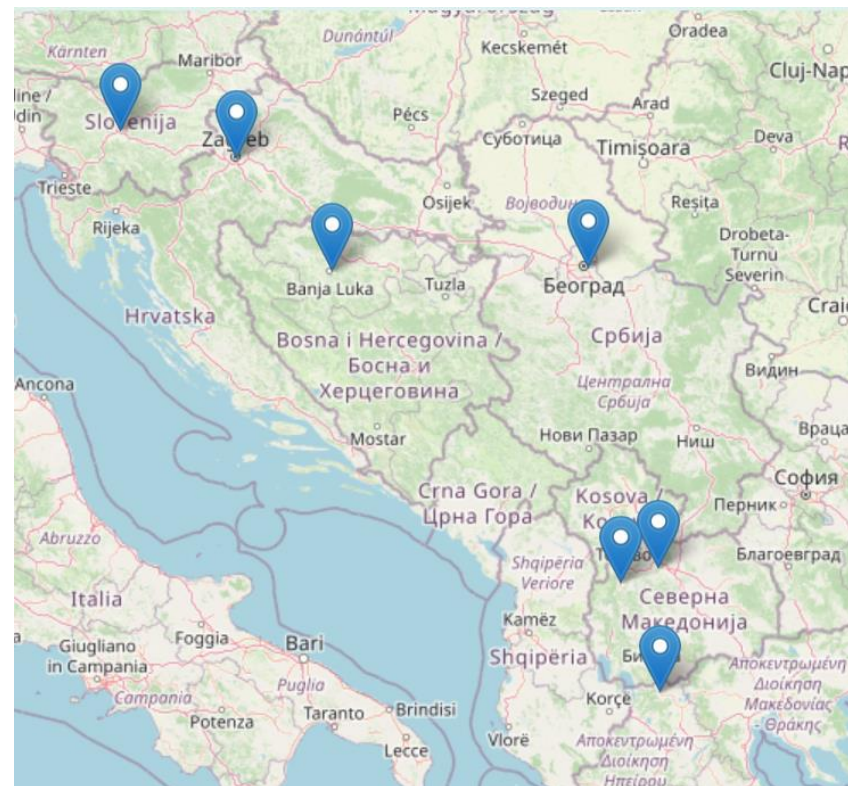
**PP3:** University of Western Macedonia, Greece

**PP4:** University of Zagreb Faculty of Electrical Engineering and Computing, Croatia

**PP5:** Institute Mihajlo Pupin, Serbia

**PP6:** University of Banja Luka, Bosnia and Herz.

**PP7:** Serafimovski TEK, North Macedonia



## OVERALL OBJECTIVE



### Innovation

Strengthen innovation in renewable energy and DT



### Cross-Sector Collaboration

Promote partnerships across industries and sectors



### Market Analysis

Analyze market trends for platform alignment



### Stakeholder Engagement

Involve stakeholders to meet diverse needs



### Digital Twin Platform Design

Develop a platform for renewable energy optimization



### Capacity Building Activities

Enhance skills in using digital twin technology

## RELEVANCE

## Tackling Key Challenges in the Adriatic-Ionian Region

### Energy Transition & Renewable Energy



- Digital twins **optimize renewable energy systems**, improving efficiency and driving widespread adoption.
- Focus on energy security, reducing emissions, and supporting the region's **shift to green energy**.



### Sustainability & Environmental Protection

- Digital twins **enhance system reliability**, minimize environmental impact, and preserve natural resources.
- Supports sustainability through real-time monitoring and **predictive maintenance**

## RELEVANCE

## Wider strategies and policies contribution

EU Strategy for the Adriatic and Ionian  
Region

- GoToTwin significantly contributes to **Connecting the Region**, a key pillar of the EUSAIR strategy.
- In terms of Environmental Quality, GoToTwin plays a crucial role in supporting **sustainable practices** and environmental monitoring.



- Renewable Energy Integration
- Efficient Resource Utilization
- Grid Stability and Flexibility
- Policy Recommendations
- Capacity Building and Collaboration

## RELEVANCE

## Wider strategies and policies contribution

## REPowerEU initiative



**Advancing** the deployment and integration of renewable energy sources in the European Union (EU)

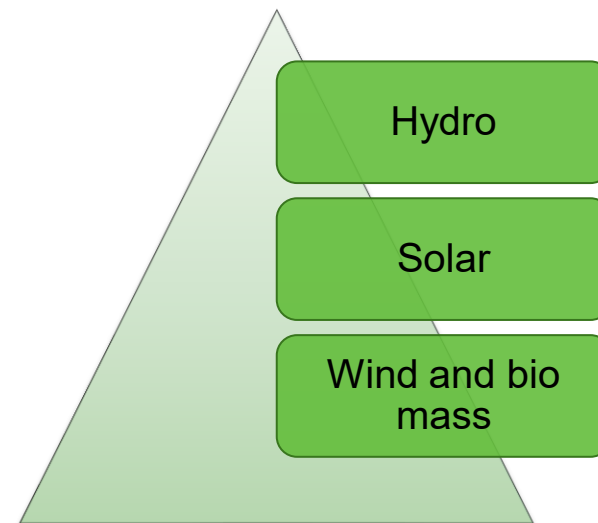
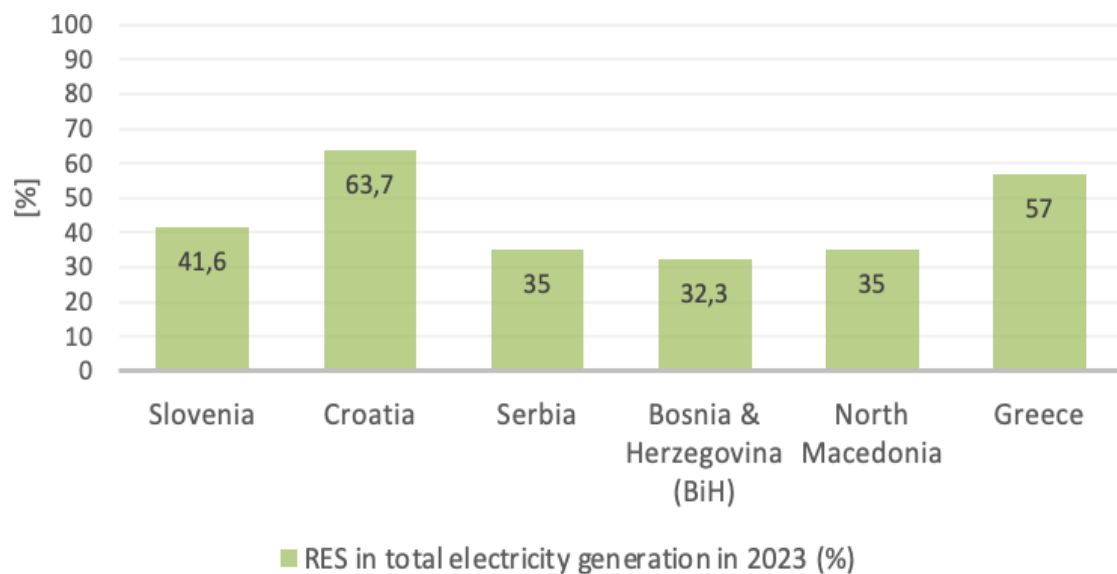


## EU action plan SWD/2022/341

**Digitalization** of the energy system  
The action plan highlights how new technologies can help improve the efficient use of energy resources, facilitate the integration of renewables into the grid, in consistence with the **digital targets for 2030**.

# MARKET ASSESSMENT IN THE ADRION

## Energy mix

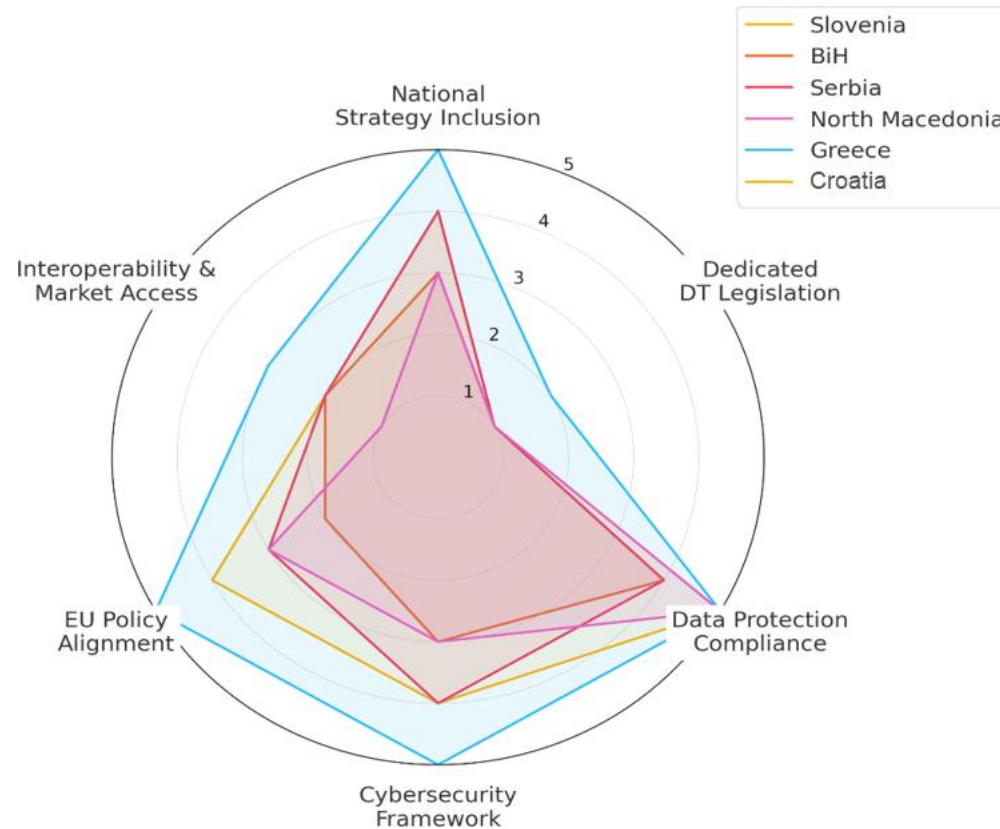


Energy mix in the Adrion

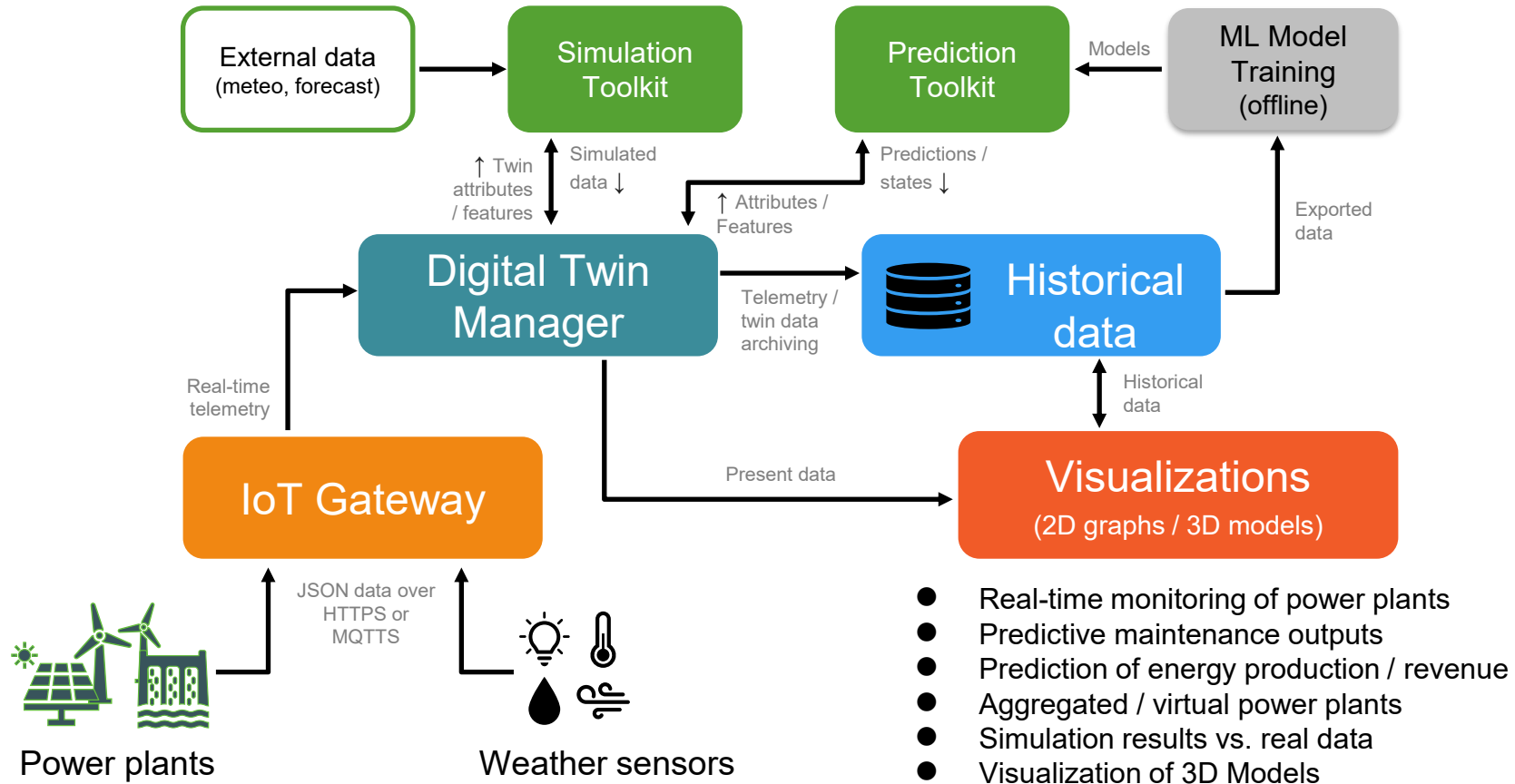
## TRANSNATIONAL PERSPECTIVES FOR DIGITAL TWIN APPLICATION

### Joined targets:

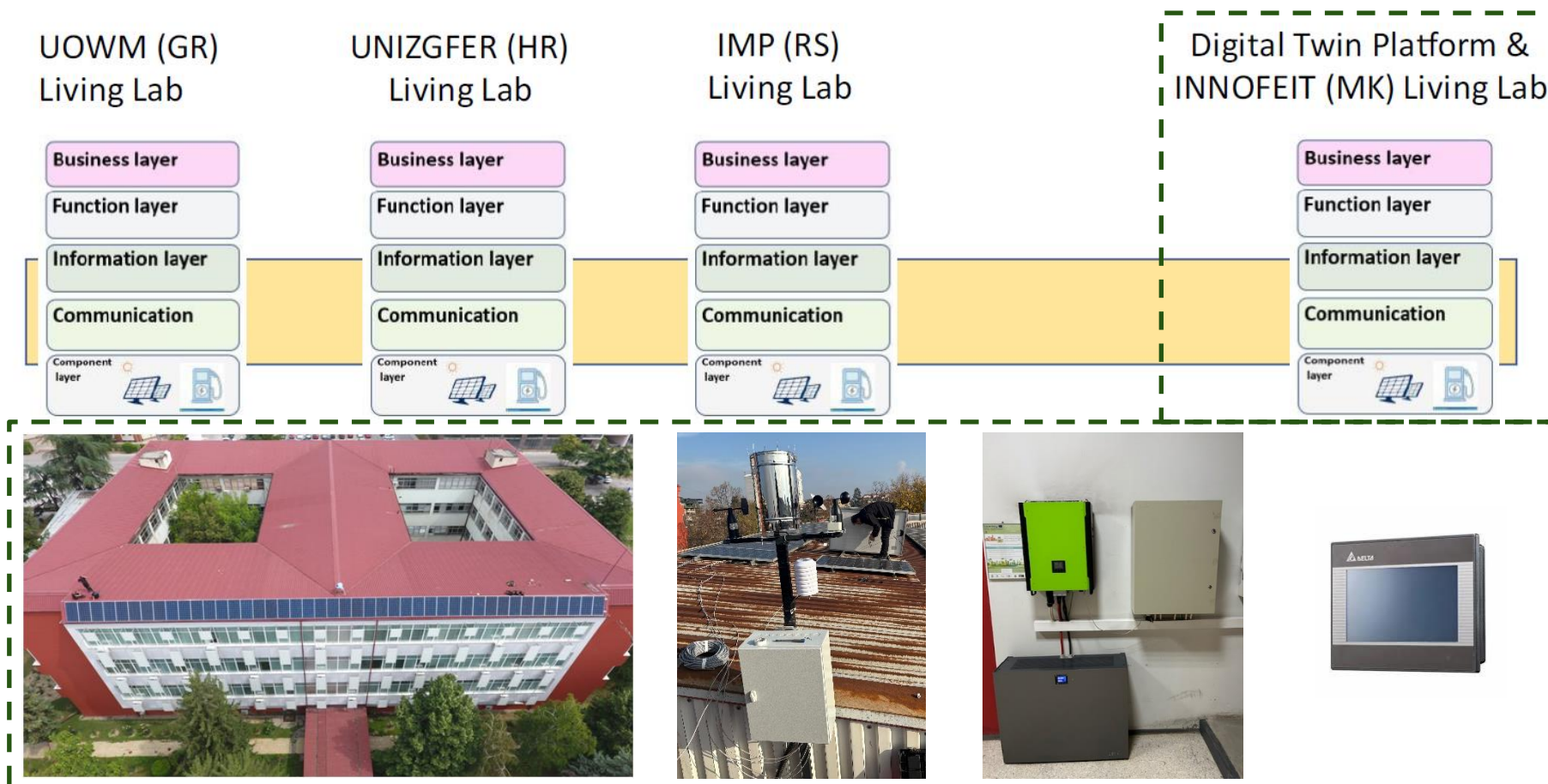
- Reducing greenhouse gas emissions;
- Increasing the share of renewable energy sources in their energy mix;
- Improving the energy efficiency and
- Enhancing cross-border collaboration.



# GOTOTWIN DT ARCHITECTURE



# GOTOTWIN ECOSYSTEM





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