

## CONSORTIUM



### DURATION

1 July 2024 – 31 December 2028



### PARTNERS

15



### COUNTRIES

9



### PROJECT BUDGET

€5.3 million

## CONTACT US

### RSTER

Foad Gandoman

✉ [foad.gandoman@rster-link.com](mailto:foad.gandoman@rster-link.com)

Vijay Nagulapati

✉ [vijay.nagulapati@rster-link.com](mailto:vijay.nagulapati@rster-link.com)

## FOLLOW US



#TWINVESTProject



[twinvest-project.eu](https://twinvest-project.eu)



Funded by  
the European Union

Funded by the European Union under Grant Agreement No 101146936. Views and opinions expressed are however those of the author(s) only and do not necessarily reflect those of the European Union or the European Climate, Infrastructure and Environment Executive Agency (CINEA). Neither the European Union nor the granting authority can be held responsible for them.



# TWINVEST

Digital Twin for Informed Wind Energy Investment



# TRANSFORMING ONSHORE WIND OPERATIONS

TWINVEST will revolutionise the energy sector by modelling the complete wind farm system, encompassing its components and environmental dynamics. Incorporating advanced analytics, AI, and machine learning, it will enable operators to forecast, oversee, and enhance wind farm performance, supporting new wind farms development.

The TWINVEST DT will demonstrate its strength as a sustainable and strategic long-term tool for comprehensive simulation and modelling of complex wind farm projects. It will enhance conventional financial analytics and portfolio strategies, offering a more comprehensive and precise foundation for investment choices and decisions, as well as tracking energy production performance in the long term.

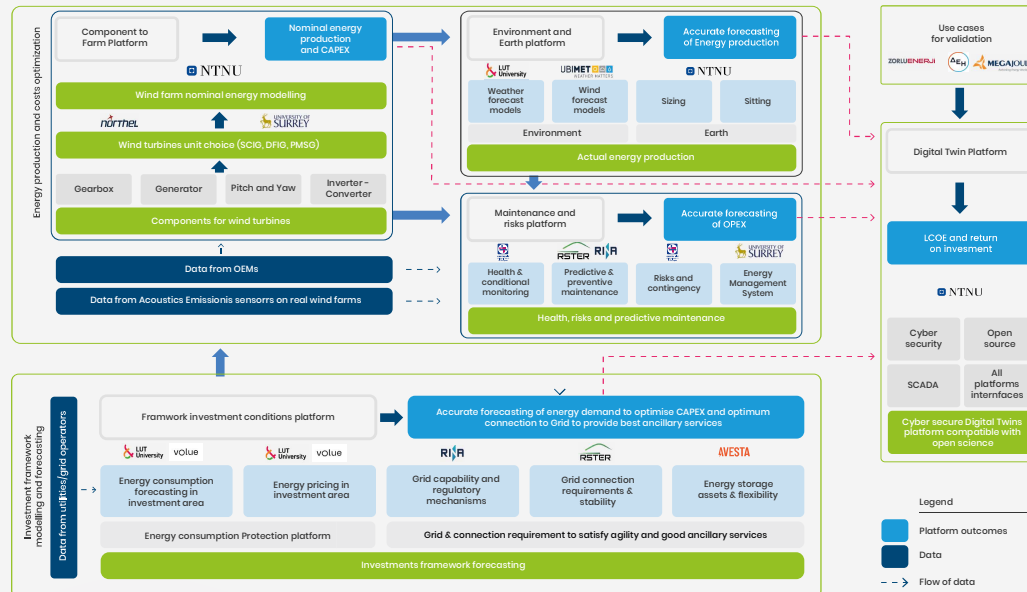
## OBJECTIVES

- Develop an Investment Framework Platform to forecast conditions across EU regions
- Develop a Farm Platform Component to model energy production and forecast investment costs from design to operation.
- Develop an Environment and Earth Platform using hybrid AI algorithms to forecast wind energy production,
- Develop a Maintenance and Risk platform using AI-driven diagnostics to analyse monitoring data, optimise energy production, guide predictive maintenance, and reduce downtime, operational costs, and LCOE.
- Validation and optimisation of the digital twin's output on physical and virtual use cases
- Digital twin exploitation roadmap beyond the lifetime of the project.
- Effective communicating and disseminating toward industrial and scientific communities.

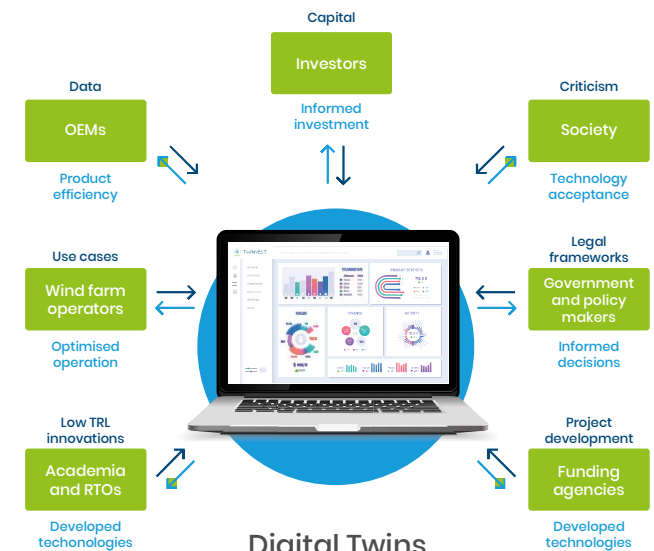
## IMPACT

- Expected increase in energy production.
- Potential optimisation of grid imbalance.
- Empowering OEMs to research and develop new components with enhanced performance.
- Deliver more cost-effective and competitive energy solutions to society.
- Enhancing the research and investment in the wind energy sector.

## THE TWINVEST CONCEPT



## CONNECTING STAKEHOLDERS



## Digital Twins for Wind Energy Production

