

OUR PARTNERS



UNIVERSIDADE
TÉCNICA DO
ATLÂNTICO



CAMPUS
DO MAR



PROJECT INFORMATION

START DATE

1 September
2024

END DATE

31 August
2027

PROJECT ID

101158432

PROGRAMME

Horizon Europe

PROJECT COORDINATOR



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NOVEL DIGITAL COMPONENTS FOR INTERNATIONAL RENEWABLE ENERGY VALUE CHAINS



Funded by
the European Union

UNDER GRANT AGREEMENT NO. 101158432

WHAT?

ORION supports the transition to a sustainable, resilient, and cybersecure energy system, aligned with European climate goals, helping achieve a climate-neutral future by 2050.

ORION IN NUMBERS

36 MONTHS

8 COUNTRIES

12 PARTNERS

4 CONTINENTS



WHY?

Twin Energy Transition

by developing digital components for the renewable energy value chain

Developing Modular Tools

that enhance renewable energy systems

Apply Modular Tools to Use Cases across four continents

Reduce dependence on fossil fuels

by promoting sustainable renewable energy technology

OUR MISSION

Improve digitalization for energy stakeholders through a human-centric Digital Twin, enhancing decision-making and supporting sustainable, affordable renewable energy.

OUR VISION

Boost Europe's renewable energy leadership by using digital innovation to optimize production, cut emissions, promoting global sustainable energy.

HOW?

Each of these use cases showcases unique challenges and transformative goals in advancing renewable energy across different contexts and geographies.

Norway & Cape Verde

This Use Case connects Norway's Ålesund and Cape Verde's Porto Grande ports to cut emissions and enhance clean energy use.

EDP implemented Villacastin and Cruz del Hierro as hybrid farms, which combine solar and wind power.

Portugal

Slovenia

The Sigma Wave Energy Converter is a 30-kW prototype offshore Montenegro, using sensors and cameras to monitor wave energy performance.

UFRJ is developing a distributed co-simulation system linking its lab with Brazil's system operator to build secure, real-time Digital Twins of transmission grids.

Brazil

Canada

Alberta targets 30% renewable electricity by 2030, with University of Alberta labs applying AI and data to enhance power sector analytics and monitoring.