



BROAD-BASED COMPREHENSIVE TRAINING

- Training from operator to engineer level covering all disciplinary fields
- 12 master's and engineering courses covering **all marine sciences**
- About **250 students** receiving initial training each year
- Over **20 executive training modules**

**WEST ATLANTIC
MARINE ENERGY
CENTER**

Research, Education
& Innovation
in **PAYS de la LOIRE**

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GET IN TOUCH

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**Your challenges have solutions,
please contact WEAMEC,
we can make it with you!**

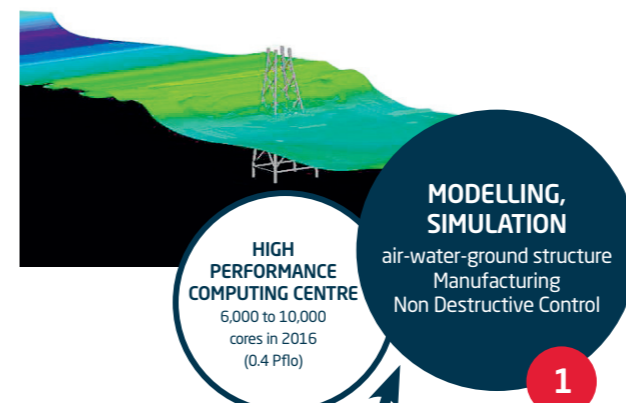
**BOOST YOUR RESEARCH AND INNOVATION PROJECTS
TO SUPPORT INDUSTRIAL DEVELOPMENT**

DRIVE YOUR STAFF TRAINING FORWARD



A VIBRANT ECOSYSTEM

- More than **25 institutes and labs**: 300 researchers (1,50 FTE).
- About **80 industrialists involved** in MRE challenges (DCNS, EDF, ENGIE, GE, STX, Rollix, NEOPOLIA EMR,...).
- **Across the entire value chain** from research to offshore operations.
- **Main competences**: ocean engineering, advanced manufacturing, structural health monitoring, electrical engineering, human sciences.
- More than **150 ongoing research and innovation projects**.
- **A project portfolio >50M€**.
- **Port Infrastructure** (St Nazaire) and **unique experimental facilities**:
 - Multi-MRE technology offshore test site, SEMREV.
 - Large lab test facilities (wave tank, wind tunnel, mechanical and electrical test benches, advanced manufacturing and non-destructive control processes).



COMPETENCES ACROSS THE WHOLE INNOVATION PROCESS



OCEAN ENGINEERING

- Offshore structure design (floating structures and civil engineering)
- Biofouling
- Corrosion

SMART MANUFACTURING

- Large Offshore structure advanced manufacturing
- Non-destructive control
- Structural health monitoring
- Logistics

ELECTRICAL ENGINEERING

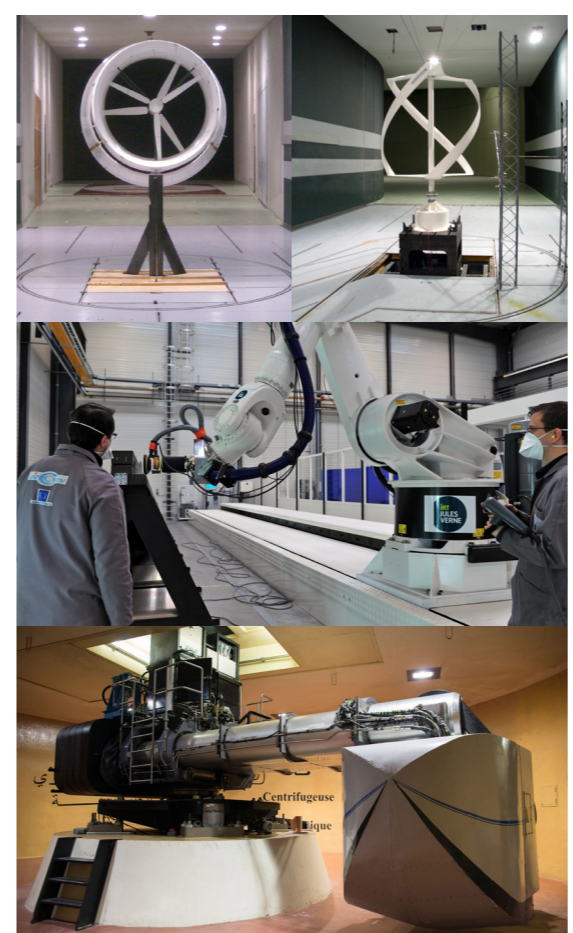
- Machine and farm connections
- Storage, intermittency management
- Current quality

HUMAN SCIENCES

- Off-shore law
- Safety and economics
- Spatial planning

ESTABLISHED COMPETENCES ACROSS THE ENTIRE VALUE CHAIN

SUBSTANTIAL, UNIQUE, RENOWNED TEST FACILITIES



- **Multi-MRE technology offshore test site** - SEMREV/Centrale Nantes
- **Wave and towing tank** - Centrale Nantes
- **Geotechnical centrifuge** - IFSTTAR
- **Aerodynamic wind tunnel** - CSTB
- **Advanced manufacturing and non-destructive control processes**:
 - **Robotic finishing** (manufacturing up to 18 m) - Jules Verne Technological Research Institute (IRT)
 - **Fatigue test bench** (Blades up to 8 metres) - IRT
 - **X-ray computed tomography** (Non-destructive control blades up to 7 metres) - CEA Tech
- **Mechanical testing for cables** - IFSTTAR
- **Energy System test benches** (800 kW - Hard In the Loop)-CEA Tech
- **Numerical simulation - high performance computing** - Centrale Nantes
- **Material testing in multiphysic marine climate chambers** - Université de Nantes
- **Marine growth on-site evaluation** (Biocolmar) - Université de Nantes
- **Smart Materials Testing Center** (SEA-SMS) - Université de Nantes