



Dr Giovanni Rinaldi

Research fellow in offshore renewable energy



○ **Brief biography:**

- Postdoctoral researcher specialising in offshore renewables' evaluation and tools development
- Main expertise related to O&M strategic planning for offshore renewable farms, including asset management and logistics
- Lead investigator in the work package “Operation and maintenance strategies, sensorisation and monitoring” of EU H2020 project FLOTANT.



○ **Rationale for application:**

- Fill existing gaps in knowledge of condition monitoring and O&M tools integration
- Gain experience with industrial processes
- Improve funding and awards track records

Project: 2-weeks industrial placement at INEA to investigate sensing of offshore renewable devices and integration in O&M modelling



Slovenian leading company in the field of manufacturing informatics, system integration, automation and automated process control

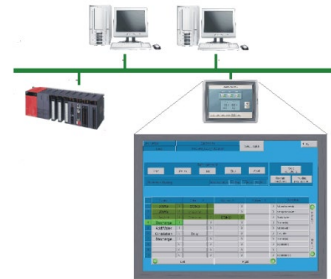
○ Objectives:

- Familiarise with INEA's solutions for energy systems monitoring and optimization, with special reference to condition monitoring and control of industrial machines
- Review existing hardware and methodologies for sensing and fault detection of industrial components, including “virtual” sensors
- Explore integration of sensors/CM data with O&M strategic models for offshore renewables



○ Results:

- Understand principles of automation in production lines for industrial factories
- Review existing solutions for condition monitoring and fault diagnosis and prognosis in industrial machines
- Practice with INEA's products for energy production, monitoring and demand/response management



○ Achievements:

- Transfer acquired knowledge to the ORE sector: sensing and data processing
- Improve University of Exeter O&M computational tools for O&M planning of ORE farms
- Write review journal paper