



Dr Giovanni Rinaldi

Research fellow in offshore renewable energy



**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*

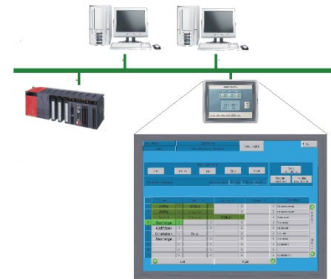
○ **Objectives:**

- 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



## ○ Future work:

- 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