

## iFADO Good practice: Deployment of instrumentation on platforms

**PML** | Applications Ltd

### Introduction/Context: PML Group – Industry Engagement

PML Applications Ltd is the commercial arm of the Plymouth Marine Laboratory (PML). We are an independent marine test house and applied research centre. We provide innovation in the design, development and testing of a wide range of marine technologies, with particular emphasis on corrosion prevention and biofouling control approaches.

Our unique marine R&D facility allows our customers to move rapidly from laboratory-based proof of concept work, to controlled field tests, and finally out to the open ocean for *in-situ* tests on our off-shore buoys and research vessels.

PML Applications is a client facing organisation. We enable our customers to access and benefit from academic knowledge and expertise in our parent company, PML, in a business-friendly manner.

### Best practice:

PML Applications has a number of options to install customer equipment to test deployment under real-world conditions:

#### Research Vessel:

The *Plymouth Quest*, together with her highly skilled crew specialise in the deployment and

testing of scientific apparatus. She is capable of operating offshore and provides our customers with an instrumented marine test bed, and safe access to extreme marine environments.

#### Buoys:

At 10 and 25 nautical miles from Plymouth, our offshore buoys provide research and development opportunities for marine instruments in a real world test environment. The test platforms are supported by a continuous near real-time data environmental stream that includes seawater temperature, salinity, nutrient and chlorophyll concentrations, as well as atmospheric and meteorological variables.

#### Tidal Marina:

Millbay Marina is a tidal marina located approximately 500 meters from the main PML building. Millbay is used exclusively by PML Applications as a test site for much of its antifouling work. It represents a safe and secure testing environment for marine instruments and antifouling technologies, with accompanying long-term environmental data. This versatile test site also allows us to operate bespoke, powered and instrumented test rigs to address specific questions.



## Results: Case Studies/Customer Feedback

“PML Applications Ltd was an invaluable partner in our study of the effect of marine growth on our subsea connection systems in marine energy environments. From desk-top study and professional advice, through to design of the subsea trials, and then work offshore to evaluate and report on the recovered test rig. Their professionalism, their extensive knowledge and experience and passion really shone through. They were able to give us advice and solutions that took the theory and observed results, and apply that to what would work on our specific products in the real-world. They always went the extra mile. Highly recommended.”

- Rob Wyatt Product Manager, Siemens Subsea

“...PML Applications helped us evaluate and demonstrate the technology working up from test pieces up to full size components. The team undertook unique testing with bespoke test rigs to evaluate propeller fouling in a real-world marine environment. This developed the technology from TRL 3 to TRL 6 and we are now seeking to commercialise our novel antifouling technology...”

- Dr Alexis Lambourne, Materials Engineer

**Contact:** Tom Vance, [thva@pml.ac.uk](mailto:thva@pml.ac.uk)

