

PBO Marine

SERVICES

Navigation, vehicle systems, validation and advisory

NAVIGATION AND DATA

RTK, INS, DVL and USBL integration

RTK GNSS coupled with inertial navigation on the surface, INS/DVL/USBL below it. Sensor integration, lever-arm and misalignment calibration, mobilisation procedures, offshore support during campaigns.

Survey operators · marine civil works · marine deeptech · sensor manufacturers

Engagement Day rate or short mission

Post-processing and data QC

Trajectory reprocessing, post-mission RTK/INS/DVL/USBL fusion, positioning accuracy assessment, quality control of survey deliverables.

Survey operators · hydrographic offices · engineering consultancies

Engagement Per dataset or campaign

Wind measurement chain

Wind sensing, true-wind reconstruction, performance model and polars. Developed in house for the Sail Machines programme.

Offshore racing teams · shipyards · naval architects · wind propulsion

Engagement Integration package, then annual licence

VEHICLE SYSTEMS

Vehicle architecture and embedded electronics

Marinised carrier board and flight computer, power budget, acquisition chain, autopilot, redundancy strategy, full design dossier.

USV and AUV startups · shipyards · civil surface robotics

Engagement Design package, 10–30 days

Sensor and payload integration

Mechanical, electrical and software integration of bathymetry, current profiling, CTD and structural sensors. Interface definition, timing and synchronisation, hydrodynamic fairing.

Vehicle operators · sensor manufacturers · research institutes

Engagement Integration package

Robotisation of existing craft

Conversion of a manned vessel or RIB to remote or autonomous operation: steering and throttle actuation, autopilot, control link, failsafe and recovery modes.

Shipyards · port authorities · survey operators · workboat operators

Engagement Study, then supervised installation

Instrumented buoys and moorings

Long-duration measurement stations: power budget and solar sizing, data logging, satellite and cellular telemetry, mesh networking, deployment and recovery.

Water agencies · marine parks · aquaculture · offshore wind developers

Engagement Design package or turnkey unit

VALIDATION AND ADVISORY

Mine countermeasures and defence exercise support

Field deployment of AUVs for mine countermeasures, and support of unmanned systems during multinational naval exercises such as NATO REPMUS: mobilisation, navigation setup, deployment, data collection and debrief. Detection acoustics.

Naval forces · system integrators · defence programme offices

Engagement Exercise package, on site

Sea trials and qualification

Trials plan, instrumentation of the campaign, at-sea supervision, performance qualification against specification, trials report. Vessel chartered as required.

Vehicle builders · shipyards · research institutes · funding bodies

Engagement Campaign package, preparation to report

Training

Two to three day modules: inertial navigation, DVL, USBL, calibration, field deployment. Classroom and onboard.

Survey operators · engineering consultancies · manufacturers

Engagement Open or in-house sessions

Technical opinion and due diligence

Architecture, feasibility and technology-readiness review, delivered as a written report. Specification drafting and tender evaluation. Technical assessment of candidates for search firms.

Deeptech and bluetech funds · innovation clusters · public buyers · banks

Engagement Two to five days, report delivered

Pierre Bourcier — PBO Marine
contact@pbomarine.com · La Trinité-sur-Mer, France
NDA signed before technical exchange.