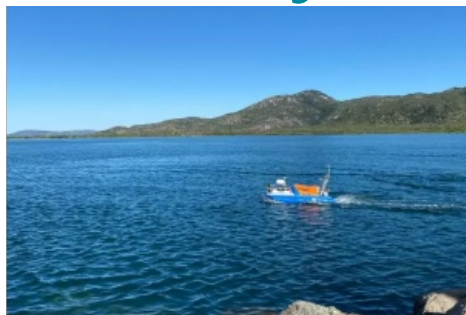
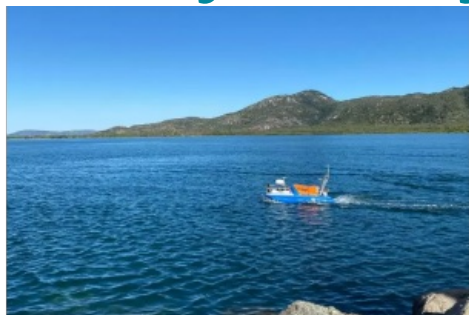


Uni-Pact USV Completes Bathymetry Survey in Australia



Unique Group has successfully supported the Australian Institute of Marine Science in completing a carbon-conscious bathymetric survey at Cape Ferguson by performing seabed modelling for their upcoming project, using its proprietary unmanned survey vessel, Uni-Pact.

The Australian Institute of Marine Science (AIMS) was looking for an autonomous survey vessel to acquire bathymetry data

to perform seabed modelling for their jetty extension plans. In line with this, they reached out to Unique Group, who executed the project to showcase Uni-Pact's capabilities and effectiveness for the project.

Tidal Swings

One of the challenges faced in the project was tidal swings – during the very low tides the USV had to be launched very early and recovered late – and, associated with this, recharging of the USV battery, which had to be scheduled with the tide to maintain the vessel's endurance. 4G coverage was also patchy, which was addressed by collaborating with [METOCEAN](#) and setting up a satellite communication system to control Uni-Pact.

Surveying 900km From Project Location

Unique Group delivered a ready-to-deploy, fully calibrated [Uni-Pact USV](#) to the project site that was fitted with the Norbit iWBMS. Uni-Pact was the best solution for the client's requirements, as the multibeam echosounder integrated quickly with the USV and the sound velocity probe was easily deployed using the winch in the vessel. The system also had excellent over-the-horizon navigation and sensor control. A key highlight was that the Port of Brisbane surveyors were able to monitor the survey remotely from Brisbane, over 900km from the project location.

The Unique Group team piloted Uni-Pact through the line of sight and autonomously from the base station in the AIMS facility. It also supported the hydrographer by performing on-site checks for the survey solution.

The Benefits of an Autonomous Survey Vessel

Using an autonomous survey vessel on such a project has many benefits, including time savings and cost efficiency, as the project was completed in a shorter time than it would have been using conventional methods. Uni-Pact also reduced the process complexity as it is a lightweight and easy-to-deploy solution. It is also a completely environmentally friendly solution, as its electric engines make zero noise, thus reducing disturbance to the aquatic ecosystem. The project also demonstrated the benefits of working autonomously and remotely, as the surveyors were able to remotely monitor the project from Brisbane.

Melanie Olsen, AIMS, commented: "Uni-Pact (UP-002) performed as expected and advertised, with absolutely no surprises to the client, operators or surveyor. Its functionality, stability and reliability meant there were zero hours lost due to failures, so the maximum benefits were capitalized throughout the project."



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