

Symbiotic Autonomy For Deep Water Survey



[ASV Global \(ASV\)](#), in partnership with Sonardyne International Ltd., the National Oceanography Centre (NOC) and SeeByte, have successfully delivered a long endurance, multi-vehicle, autonomous survey solution. Pairing an [Autonomous Underwater Vehicle \(AUV\)](#) or unmanned underwater vehicle with an Unmanned Surface Vehicle (USV) means that positioning accuracy – crucial for high-quality survey data – can be optimised on missions lasting weeks, if not months, without the need for manned surface vessel support.

This technology can open up dramatic cost-savings in a wide-range of maritime applications from pipeline surveys to scientific coral exploration and deepwater seabed mining.

Autonomous Surface and Sub-surface Survey System Trial

A recent two week trial in Scotland's Loch Ness was the culmination of the three year 'Autonomous Surface and Sub-surface Survey System' collaborative project, part-funded by Innovate UK and Dstl.

The aim of the project was to deliver an integrated system to perform low cost, full water column marine surveys using multiple autonomous systems.

During trials in and on the loch, Sonardyne's USBL acoustic positioning and [AvTrak telemetry systems](#) enabled ASV's [C-Worker 5 Autonomous Surface Vehicle \(ASV\)](#) to locate, track, command and control the NOC's Autosub Long Range (ALR) AUV. Position and mission status updates were transmitted to shore via RF communications.