blue zone GROUP

UnderCurrents

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Autonomous Uncrewed Vehicles in the Maritime Domain

Sovereign Payloads for the ADF

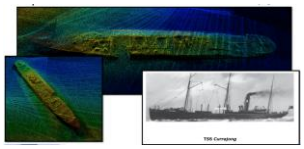
The ADF continues to develop plans for manned platforms, like frigates and submarines, that are going to cost billions of dollars and not produce any increments in capability until well in the future, but are they planning to spend scarce project dollars on the wrong things? Many observers believe that manned vessels should be command centres for hosts of small uncrewed autonomous vehicles which can overwhelm any antagonist.

BlueZone is involved in several initiatives in both mine warfare and anti-submarine warfare, two key elements of uncrewed surface warfare as a whole. In both cases it has become clear that autonomous and automated platforms and systems are not a capability of and by themselves. They do not replace manned capability; they augment and amplify it. It is essential to modify and adapt systems to work seamlessly with sovereign warfighters. This requires a strong, trusted and professional partnership between ADF operators and Australian industry. BlueZone has worked hard over the last 20+ years to establish such a relationship and now it can boast an unparalleled level of collaborative activity to design, develop and deliver maritime uncrewed capability with sovereign payloads across the ADF.

Autonomous Uncrewed Vehicles in the Maritime Domain

Teledyne Reson T30 and T51 Demonstration in Sydney Harbour

Comparison of sonar performance on multiple targets



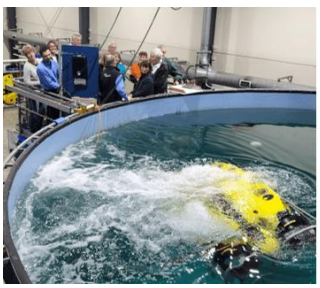
In April 2022 BlueZone Group hosted Teledyne Marine representatives for a demonstration conducted in Sydney Harbour showing obstacle avoidance, target detection, and bathymetric capabilities of the RESON F30 and T51 Multibeam Systems.

Multiple targets, including mine-like objects, were deployed by customers which were all successfully detected by both the T30 and T51. Targets including shipwrecks were also successfully surveyed with data processed using Teledyne PDS, a multipurpose software platform that supports a wide range of tasks within Hydrography, Dredge Guidance, Construction Support, Search & Recovery Operations and Port Entrance Monitoring.

Teledyne Reson TF30 and T51 Demonstration in Sydney Harbour

ATSE Visit to BlueZone in Newcastle

BlueZone were honoured to host the Fellows of ATSE



The fellows of the Australian Academy of Technology & Engineering (ATSE) visited BlueZone Group at our site in Newcastle NSW in April 2022. It was an honour to talk to our guests about our company and our projects, as well as to hear their fascinating stories.

ATSE brings together Australia's leading experts in engineering, technology, and applied science to provide practical, evidence-based, and impartial advice on ways to achieve sustainable solutions and advance prosperity.

ATSE fellows seek to be excellent, independent and innovative in all that they do, and to have that excellence recognised nationally and internationally. These values are very closely aligned to ours. At BlueZone we also value innovation and authenticity and strive for excellence.

Thank you ATSE for your visit. It was a pleasure to meet you!

ATSE Visit to BlueZone

Join Us in 2022 at BlueZone Group!

BlueZone is hiring for exciting projects in Uncrewed Maritime Systems

As an underwater technology company, BlueZone offers employees the opportunity to discover a career in the last frontier – the world's oceans! Join a company with a passion for innovation, customer focus and solution delivery.

The entire underwater robotics domain is driven by the rapid development in robotics and consumer electronics – drones & phones – which makes available more powerful software payloads, reduced weight and footprint and increased endurance through new battery technologies.

The systems engineering role at BlueZone will be an exciting role at the forefront of rapidly developing technologies, delivering advanced projects to our customers operating in harsh environments. You will work with an experienced and successful engineering team who are focused on leading-edge development.

BlueZone is hiring

BlueZone Group and The Kraken!

BlueZone has sponsored The Kraken team for the SUBS in Schools Competition 2022

BlueZone Group is proud to again support students in the SUBS in Schools Technology Challenge for 2022. BlueZone has sponsored 'The Kraken' team from Brighton Secondary School who represented South Australia in the National SUBS in Schools Competition in April 2022.

The SUBS in Schools challenge is the result of a collaboration with Re-Engineering Australia, the Department of Defence and industry stakeholders including the ASC and Saab Australia. At BlueZone we believe STEM skills will be highly valued in future as they are now, and we are glad to support students who wish to pursue interest in fields of science, technology, engineering, and mathematics.

BlueZone has previously supported the challenge by working with the students from SPCC who won the national competition in 2020. The students worked with our engineers who acted as mentors while they were developing their sub and the results achieved by the students were exceptional.

We wish The Kraken team, and all the students participating in the challenge, all the best for the competition.

Team Kraken Sponsorship

Events

Please join BlueZone Group at these upcoming events as travel restrictions ease around Australia!

We are keen to talk to you about how innovative new technologies offered by BlueZone can solve issues for your challenges in Australia's oceans, coastal seas, and rivers. We are happy to answer your questions and arrange on-site demonstrations and further discussion if required.

NSW Defence and Aerospace Futures Forum – 9 May – ICC Sydney

BlueZone Group CTO, Darren Burrowes, will join the Robotics and AI panel at the NSW Defence and Aerospace Futures Forum, to be conducted on Monday 9 May 2002, prior to INDO PACIFIC 2022 International Maritime Exposition. It will be a full-day event with keynote speakers and specialist panels comprised of industry and others. The panels include nuclear, space & guided weapons, and robotics/AI.

Defence and Aerospace NSW is organising this industry event. The objective of the forum is to provide NSW defence and aerospace industry with an up-to-date forecast of industry opportunities over the next 10 years with up to 80 participants expected.

INDO PACIFIC 2022 International Maritime Exposition – 10 to 12 May – Sydney

BlueZone looks forward to the chance to meet with many of our Navy customers in Sydney in May. With many uncrewed maritime systems now being delivered or entering service, there are many opportunities to find a technology edge through Navy-industry collaboration on the acquisition, operation, and sustainment.

Meet our team at Stand 4L8.

Autonomy in the Maritime Domain - Wednesday May 11, 2022, at Indo Pacific 2022 in Sydney.

BlueZone Engineering Manager, Norman Ballard, will present a paper “ASW Utilising Wave Gliders” as part of our program for the Australian Association for Uncrewed Systems “Autonomy in the Maritime Domain” conference.

Underwater Defence & Security 2022 | 24 to 26 May | Farnborough, UK

BlueZone will join with Australian partners Sonartech Atlas and Acacia Systems to meet with other thought leaders in the underwater defence and security space at this conference supported by DE&S, the Royal Navy, NATO MUSIC, the Society for Underwater Technology, and the National Oceanography Centre. UDS includes tracks on ASW, MCM and submarine technology – all areas for implementation of uncrewed maritime systems for military advantage.

New Products & Services

Pathfinder DVL

Now available in 300 kHz OEM configuration for up to 500m bottom tracking!

Teledyne RDI has announced the release of their small but mighty Pathfinder DVL with dramatically reduced size and weight that enables Pathfinder to be installed onboard the smallest vehicles. Key features include:

- Phased Array: Unique phased array transducer design delivers outstanding position accuracy at a reduced size, eliminates the need for speed of sound correction, and reduces drag on your vehicle
- XRT (Extended Range Tracking): Patented option delivers up to a 60% increase in the bottom tracking range.
- Health Monitor: Provides insight and alerts in near real-time of potential problems including transducer health, operating time, and leaks from potential damage
- Water tracking: Extend your vehicle's range of operability by enabling navigation even when the bottom is out of range.
- INS-ready: Real-time standard deviation and time of validity output for highly accurate coupling with an Inertial Navigation System (INS) further improves your resulting DVL aided INS position accuracy.
- ADCP: Acoustic Doppler Current Profiling (ADCP) option expands scientific and operational capabilities as needs arise.
- Budget minded: Priced for smaller budgets, without the need to compromise on performance.

Teledyne RDI Pathfinder DVL XRT (Extended Range Tracking) patented option delivers up to 60% increase in bottom tracking range up to 500m.

Teledyne Pathfinder DVL

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