

## Anti-submarine Warfare

### *Contributing to ASW capability with autonomy and automation*

Submarines pose a threat to maritime security today, just as they have done since they were first introduced into service. As a potent sea denial capability, submarines pose a significant challenge to military planners because of the disproportionate response they require from their own forces. ASW is an intensive asset today as it always has been an escalation in the cost of specialist ASW forces raises challenges around affordability.

ASW is as much a numbers game as it is anything else. Therefore, uncrewed platforms have a role to play in force generation. By supplementing surveillance assets and complementing traditional platforms, uncrewed systems can increase ASW effectiveness in two fundamental ways: by increasing numbers to generate 'defence in depth' and by widening underwater sensor coverage to create 'layered defence'.

Defence in depth extends sensor networks to increase the probability of detecting hostile submarines before they can conduct attacks on friendly forces. Layered defence increases the likelihood that hostile submarines are more likely to encounter ASW platforms while trying to prosecute their assigned mission. Combined those concepts contribute significantly to the aim of ASW... to deny the enemy the effective use of its submarines.



### [Contributing to AWS capability using Uncrewed Systems](#)

## MARTAC MANTAS T12 Delivery

### *Uncrewed Surface Vehicles – Beyond Human Performance*



BlueZone is pleased to be delivering the first MARTAC MANTAS Uncrewed Surface Vehicles for customers in Australia and New Zealand.

The speed, acceleration and turning performance of a MARTAC MANTAS T12 Uncrewed Surface Vehicle are beyond that which can be achieved by an equivalent small, crewed vessel. This provides new opportunities for mission success where fast transit times and high-performance handling can provide military advantage. Uncrewed systems have the exciting potential to change naval operations, from rescue operations to endurance missions, in ways that cannot yet be imagined. Large exercises with multiple navies are now developing and proving these new concepts.

### [Largest Unmanned Exercise in the World](#)

## REMUS 300 selected for Lionfish Program

### *Open architecture and modularity lead the way forward for unmanned systems*

The REMUS 300 maintains the 7.5-inch diameter of the REMUS 100, increases the depth rating to 305 meters, and remains two-man portable. Built around the REMUS Technology Platform, the design also allows for reconfigurable payloads, sensors, and energy modules to meet mission requirements.

The US Navy has announced its intent to buy HII's drone, the Remus 300, for its Lionfish SUUV program. Part of the Navy's planned family of systems, Lionfish's main role will be intelligence gathering with the Navy's expeditionary mine countermeasures company.

In 2021, HII announced that New Zealand would upgrade their fleet with new REMUS 300 UUVs. The REMUS technology has progressed significantly over the past few years, and the REMUS 300 represents one of the most advanced man-portable UUVs on the market today.



### [REMUS 300 UUV for RNZN](#)

### [U.S. Navy orders REMUS 300 UUVs from Huntington Ingalls](#)

# 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 roles 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](#)

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## 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.

### **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.

### **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.

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## 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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