



blue zone
GROUP®

Capability Statement

DEFENCE

OCEANOGRAPHIC

HYDROGRAPHIC

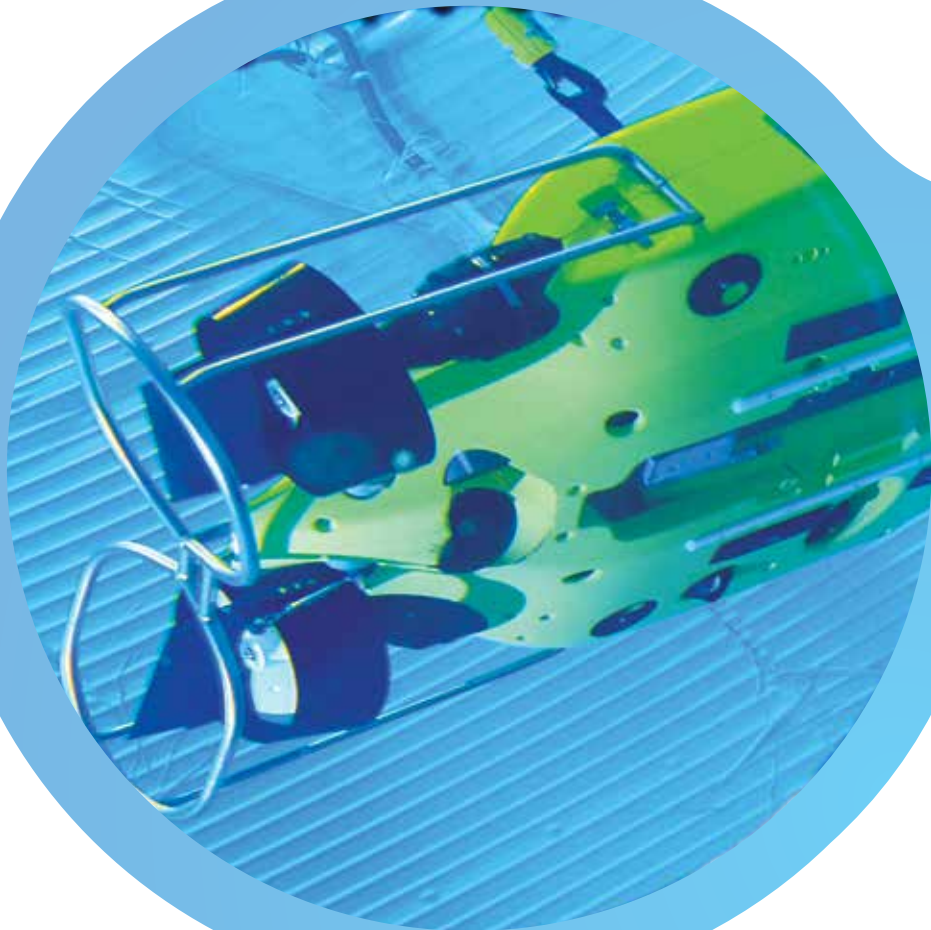
WATER RESOURCES

AQUACULTURE

ENERGY



AHEAD OF
THE TIDE™



Contents

About BlueZone Group	4
People and Facilities	6
Defence	11
Oceanographic/Hydrographic	18
Water Resources	20
Energy	22
RAS Engineering and Integration	24



About BlueZone Group

BlueZone Group is an Australian company focused on the design and servicing of quality underwater electronics used in harsh environments, BlueZone Group provides specialised products and services to Defence, Oceanographic, Hydrographic, Water Resources, Aquaculture, and Energy markets. The BlueZone Group Engineered capability provides specialist application engineering services for all types of customers operating electro-mechanical equipment in harsh environments such as subsea and defence.

BlueZone Group has a passion for customer service and a demonstrated long-term commitment to both our customers and suppliers. Our long-term relationships with suppliers set us apart and provide us with strong connections to development laboratories and engineering teams worldwide.

We bring this experience and “reach-back” to our customers in Australia to provide world class sales and support.

Australia’s ocean professionals operate in some of the harshest conditions in the world. Our heritage is from the Bass Strait where we supplied and operated amongst the first ROVs in the world to the offshore industry operating in new and challenging conditions. We know subsea equipment and what works in the ocean and other harsh environments, and we continue to push the boundaries in everything that we do.

Australia’s markets are geographically diverse. Our national footprint, with offices in Newcastle and Perth, enables us to provide a national reach with local backup for all of the equipment that we supply, service and design.



Capability Statement

BlueZone Group Profile

Experience

BlueZone Group Pty Ltd is a wholly owned Australian company headquartered in Newcastle, on the eastern seaboard of Australia. Operating since 1973 (originally as Underwater Video Systems), BlueZone Group has been a supplier of quality subsea equipment and systems to industry, science and academia for over forty years. In that time BlueZone Group has introduced a number of innovative technologies to the Australian market.

Robotic and Autonomous Systems

BlueZone Group has been working with Robotic and Autonomous Systems (RAS) since it introduced the first Remotely Operated Vehicles (ROVs) in the Australian market. In 1976 an RCV-225 was supplied by the then Underwater Video Systems and operated in Australian waters. True to the BlueZone Group philosophy of “supporting what you sell”, BlueZone Group technicians attended training in the USA on leading edge technology such as microprocessors that were incorporated into the first ROVs.

Defence

BlueZone Group has a focus on the design and repair of electronic and robotic equipment with applications specific to advanced defence systems. As service partner of Saab Dynamics since 2000, BlueZone Group has significant experience in providing complete through life support for the Double Eagle MkII Mine Disposal System operated by the Royal Australian Navy.

BlueZone Group is the premier supplier for Defence in areas of:

- Mine Countermeasures (MCM)
- Anti-Submarine Warfare (ASW)
- Military Survey, and
- Military Diving

BlueZone Group Formation

In 2015 the BlueZone Group was formed with UVS and ATSA Defence Services as core member companies. Together BlueZone Group companies service customers operating in the harsh conditions of deep oceans, coastal seas, rivers and water infrastructure. Our technically superior OEM product offering combined with our application engineering and local product development capability is at your service to address demanding requirements in tight timeframes.

Capability

BlueZone Group enjoys a unique and preeminent position in the underwater electronics market with over 50 representations and a strong repeat business from customers who have dealt with BlueZone Group companies for many years.

Nation-wide footprint

With offices in Newcastle and Perth, BlueZone Group is able to offer local service, backup and sales to customers across Australia.

Access to multiple markets

Through supply to multiple markets, BlueZone Group is able to identify synergies and provide a capable and high capacity service to diverse customers.

Sales and service synergy

The strong sales capability of BlueZone Group is matched by a highly capable service and engineering capacity in underwater technology and systems engineering. Service and engineering staff work nation-wide using modern communication tools to complete projects to high quality and customer satisfaction. Together the combined capability provides a complete service to customers supporting complex electronic systems in harsh environments.



Quality
ISO 9001
SAI GLOBAL

Complex systems + harsh environments + through life servicing = BlueZone Group expertise and passion

Quality System

BlueZone Group maintains an ISO9001 Quality Management System which is tailored to meet its business needs and exacting customer requirements. Independent system auditing is conducted by SAI Global to verify compliance with the International Standard. The inherent continuous improvement regime within the quality system is core to BlueZone Group values and business disciplines.

People and Facilities

Executive and Senior Management Team



ELIZABETH KARPIEL
Chief Executive Officer

Elizabeth has a Bachelor of Engineering (Electrical), a Diploma in Project Management and is a Certified Practicing Project Manager (CPPM) with the Australian Institute of Project Management. Elizabeth's eye for detail has been invaluable in her other company support roles in quality, safety and IT. Elizabeth was the project manager for the SeaUrchin Marine Power Generator project in partnership with Element Energy Technologies. This project won the Engineers Australia 2012 Excellence Award. Elizabeth is also an excellent communicator, having held roles as associate lecturer and tutor at the University of Newcastle.



ANDREW HAZELL
General Manager - Defence

Andrew has extensive operations management experience ranging from market analysis, due diligence and acquisitions, to commercial, HR, IR, safety and quality matters. Andrew's strong background in government relations, combined with developing and managing clients, supply chain and other stakeholder relationships has seen him successfully negotiate and manage contracts up to USD \$62 million. With more than eight years' experience delivering Hydrographic, Oceanographic and Geophysical systems within Australia and throughout South East Asia, Andrew brings a wealth of experience and a customer-centric approach to his role. Andrew holds an Executive Master of Business Administration (International Business) and an Advanced Diploma of Complex Project Management.



NORMAN BALLARD
Engineering Manager

Norman brings a wealth of engineering and business experience to the BlueZone team. Having managed and directed a number of large companies, Norman has seen the semiconductor and electrical engineering landscape through a well-focused lens. In 2008, Norman founded Hummingbird Electronics, leading it to significant growth and recognition. Earlier in 2014, Norman was the recipient of the Business of the Year in the Hunter Region Business Excellence Awards and was selected as a finalist for the Innovation Rising Star Award at the annual Hunter Manufacturing Awards in 2017. Norman holds a Master's Degree in Electronics Engineering from the University of Cape Town.



KATHRYN BOWDLER
Commercial Manager

Kathryn joined the BlueZone team in 2020 and is responsible for the finance, administration, and marketing activities for the Group. She completed her MBA with a Major in Marketing, is a member of CPA Australia, and has a Bachelor of Commerce from the University of Newcastle. Kathryn's background in both the mining and manufacturing industries has given her extensive experience in financial management, process improvement, human resource management, negotiation, and change management.

People and Facilities

Sales Management



MARK HEGARTY
Accounts Manager – Oceanographic, Hydrographic & Water Resources

Mark has been in the hydrographic surveying business for the past 34 years. He has spent 23 years in the RAN as a hydrographic surveyor, followed by 8 years in managing the support of the hydrographic and navigation equipment, installed in Hydrographic Ships operated by the Royal Australian Navy. Mark has a Diploma in Hydrographic Surveying and brings a hands-on approach to supporting customers with sales and service of oceanographic and hydrographic equipment. Mark has also completed training in Caris and Hypack and can support customers in the use of these products.

Founders



DARREN BURROWES & NEIL HODGES

In 2000, Darren Burrowes and Neil Hodges founded the company that has grown to become BlueZone Group. Darren brings a background in Electrical Engineering and served as a Weapons Electrical Engineering Officer in the Royal Australian Navy. Neil served with the Royal Navy, including operational Mine Counter Measures experience in the Arabian Gulf in two conflicts. Darren and Neil have always shared a strong vision to enable Australia's MCM capability through the provision of excellence in service, support, and engineering of remotely operated vehicle technology for Navy operations. In time, this vision has grown larger, enabling many organisations to operate in Australia's deep oceans, coastal seas and rivers with the world's leading marine technologies.



People and Facilities

Facilities

BlueZone Group operates from two workshops located in Newcastle and Perth, providing a national footprint with local customer support on the east and west coasts of Australia.

The Head Office is located in Newcastle NSW, approximately 2 hours north of Sydney and 30 minutes from RAAF Williamtown by road. Offshore Energy work and Diving is supported from a workshop located in Perth WA.

BlueZone Group test equipment includes specialised hardware and software such as a complete reference set of Mine Disposal System shipboard equipment used to service, maintain and upgrade Navy mission-critical systems. This equipment is carefully maintained to support the manufacture, repair and maintenance of customer systems of all types.

BlueZone Group workshops incorporate the following features:

- Newcastle: 500m² humidity controlled workshop and office space
- Perth: 250m² workshop and office space
- 250,000 litre testing tank (5m deep & 8m diameter)
- 1-tonne travelling crane
- Vacuum chamber
- Hydrostatic pressure testing
- Fully equipped clean laboratory

Maritime Robotics Service & Support

- Saab Seaeye Remotely Operated Vehicles
- HII REMUS Autonomous Underwater Vehicles
- Liquid Robotics Wave Glider
- MARTAC MANTAS
- Marine Advanced Robotics WAM-V
- SUEX Diver Propulsion Vehicle

Polyurethane Moulding Service

- Full capability for subsea and deck cable harness manufacture

Slip Ring Service & Repair

- Authorised service and repair facility for Focal Electrical and Fibre Optic Rotary Joint (FORJ) slip rings

Acoustic Doppler Current Profiler (ADCP) Service Centre

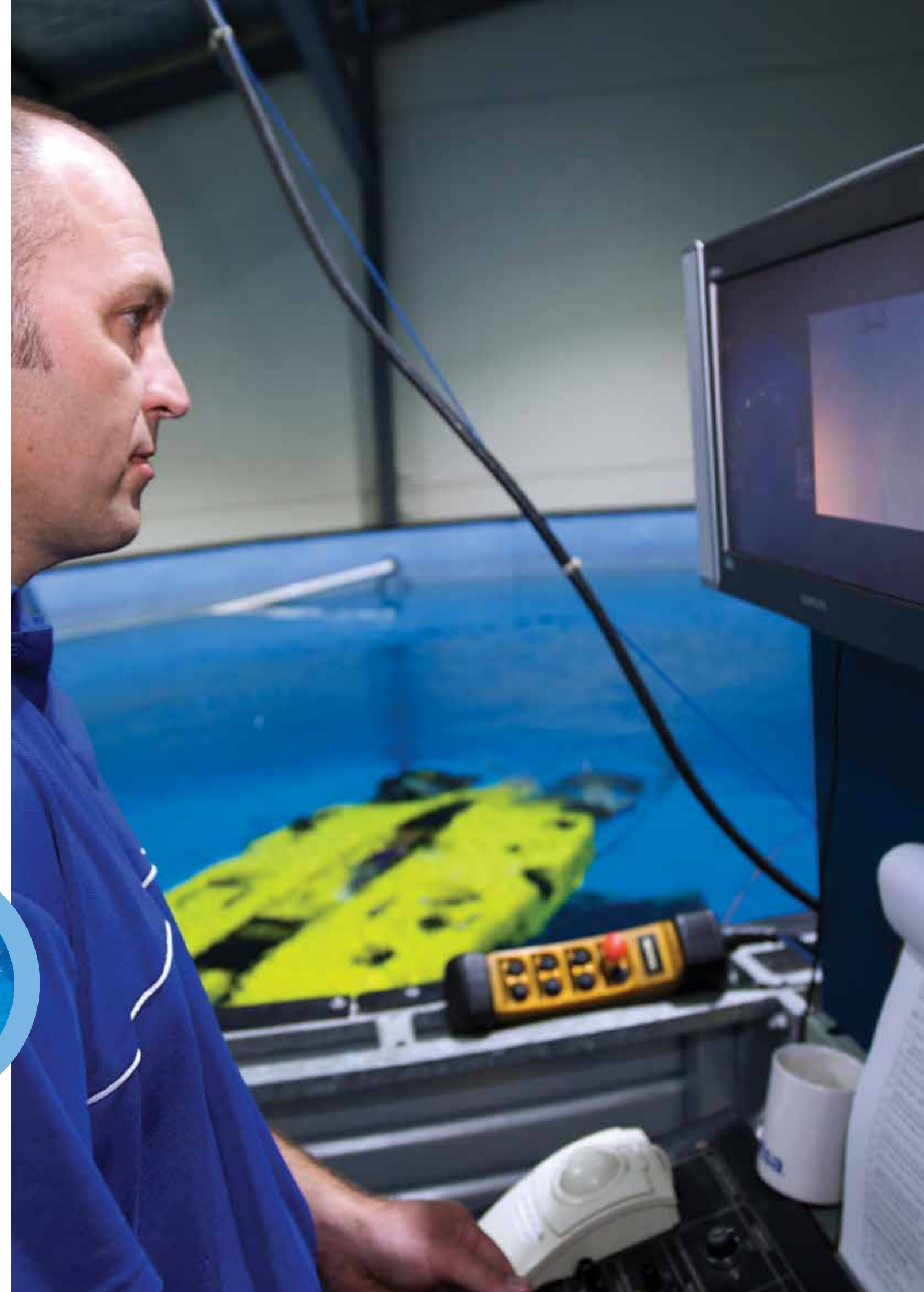
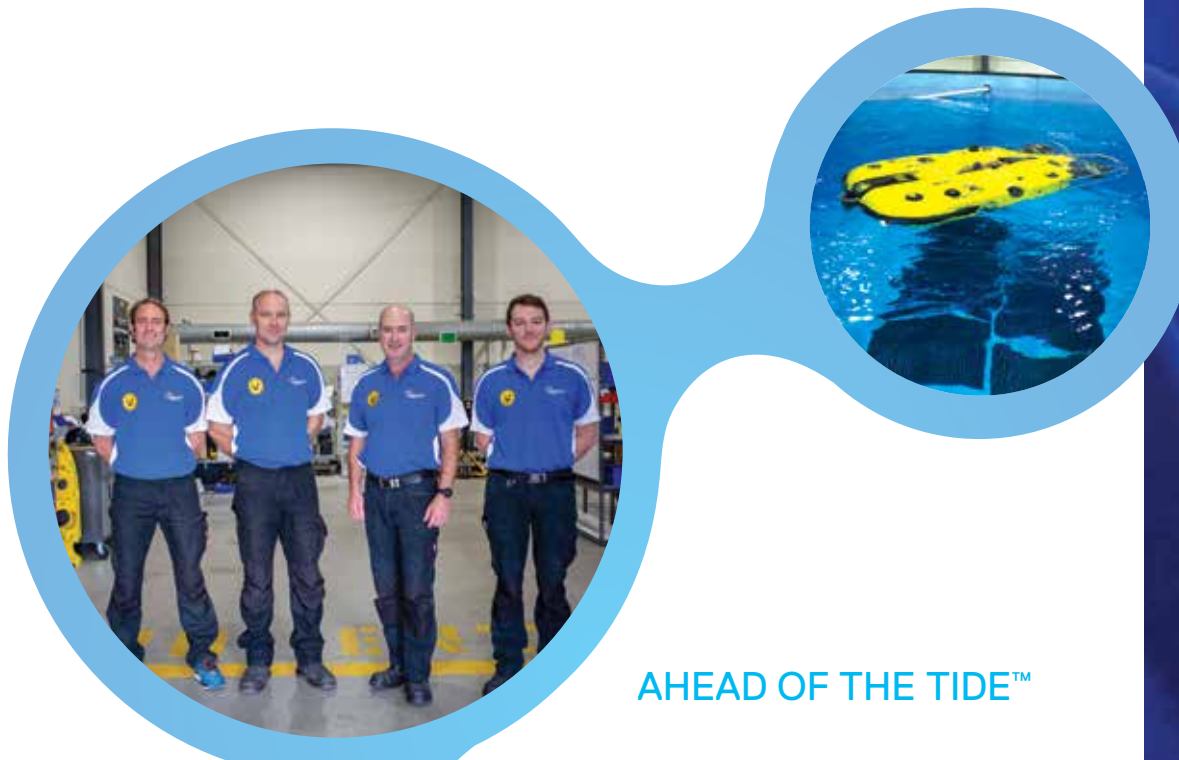
- Teledyne approved ADCP Service Centre

Specialised Paint Facility

- Full down draft heated spray booth
- ClearSignal™ Biofouling Treatment
- Painting to Defence standards

Defence Security Clearance

- Security management to meet Defence security requirements





Defence

BlueZone Group provide equipment sales, specialist engineering skills and experience in Defence for Robotics and Autonomous Systems (RAS). This capability combined with a successful track record in completing major projects has earned an enviable reputation in the Defence sector.

Anti-Submarine Warfare

Contributing to ASW capability with autonomy and automation

Submarines play a crucial role in maritime defence. The Indo-Pacific stands out as the region in which submarines are growing faster than anywhere else in the world. This means an increasing challenge when it comes to countering the threat.

Uncrewed platforms have a significant 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 a 'layered defence'.

BlueZone Group works with leading OEMs to supply, service and sustain Uncrewed Surface Vessels (USVs) and Uncrewed Underwater Vessels (UUVs) for ASW application. The BlueZone Team have been trained by the OEMs to ensure the best possible service is offered allowing these assets to remain in Australia, reducing down-time and cost.

Military Survey

Augmenting existing capabilities with uncrewed systems

The demand for survey capabilities can only be expected to grow as an understanding of the maritime warfare environment is a "knowledge edge" that is invaluable to the Australian Defence Force. Effort is required to survey and re-survey locations, especially where mobile seabeds and mobile sand waves present hazards.

Military Survey includes specialised survey activities undertaken in direct support of defence force needs, and that may be required to be completed in a covert manner or in the presence of opposition forces or heightened threat environments.

BlueZone Group's product portfolio includes specialised offerings to meet the requirements in the challenging subsea environment. At BlueZone Group "we service what we sell" to ensure sustainability of the products we offer.

Mine Countermeasures

More than 20 years of experience supporting and sustaining

Mines are some of the most attractive weapons available to any adversary determined to prevent Joint or Coalition forces from achieving access to sea lines of communications or the littorals due to availability, variety, cost-effectiveness, ease of deployment and potential impact on naval expeditionary operations.

BlueZone Group has been the in-country support and sustainment partner for the Saab Double Eagle Mine Disposal System for over 20 years. The system ensures safe, cost-efficient and reliable Mine Countermeasures (MCM) operations.

Detection, location and safe disposal of mines can be extremely difficult and dangerous. Uncrewed systems reduce the cost and danger involved to the military personnel and other military assets. The product offerings from BlueZone Group used to reduce the risk of mines in our waters are all supported through our workshops and sustained by highly trained technicians and engineers.

Military Diving

Increasing efficiency and safety for Military Diving

Military diving involves risks and responsibilities beyond those of other professional diving activities. Operations performed by divers in Defence include, but are not limited to; explosive ordnance disposal, search and recovery, search and rescue, hydrographic survey, demolition, underwater engineering, reconnaissance, underwater combat and security.

BlueZone Group supports professional divers through the provision of quality subsea equipment and components. In keeping with BlueZone's philosophy of "we service what we sell", our highly skilled workshop technicians have been trained by the OEMs in the servicing and maintenance of the products in our catalogue to ensure local service that maintains highest standards.



Defence

Through Life Support

At BlueZone Group “we service what we sell”...

Double Eagle Mk II Mine Disposal System

BlueZone Group and Saab Underwater Systems have worked in close cooperation for more than twenty years and have developed a “world class” capability for support of the Double Eagle system. This capability in Australia provides a complete service for the customer, and supports a full two-way flow of information that is facilitated through regular contact at technician, engineering and management levels.

REMUS

BlueZone Group has provided service and support for REMUS vehicles since their first introduction to applications in Australia. BlueZone Group offers all elements of support for the REMUS including full warranty support and further support and service as required beyond warranty work. BlueZone Group is registered under ITAR with approvals to dismantle the REMUS AUV.

Wave Glider

BlueZone Group provides support for all aspects of Wave Glider operations and maintenance including operational support, wave glider transport case, wave glider transport kit, and design and integration of payloads.

RAS Engineering Solutions

BlueZone Group has a proud history of subsea and harsh environment engineering excellence dating back to the 1970s.

Let the experience of our in-house engineering team assist you quickly and cost-effectively, to take your requirement from the concept stage to operational reality. BlueZone’s on time, on budget and in accordance with our ISO 9001 accredited quality assurance program.

Our focus is on engineering for the subsea environment and our experience in this application can benefit if you have a demanding requirement for electronic systems in any type of harsh environment.





Photo credit: Huntington Ingalls Industries

Defence Project Experience

BlueZone Group draws on more than twenty years' experience as a Defence-focused SME. The company has a track-record of high-quality performance on multiple projects for the Australian Defence Force.

Wave Glider In Service Support

By continuously harvesting energy from the environment, Wave Gliders can travel long distances, hold stations, and monitor vast areas without ever needing to refuel. A unique two-part architecture and wing system that directly converts wave motion into thrust, and solar panels that provide electricity for sensor payloads, mean Wave Gliders can travel to a distant area, collect data, and return for maintenance without ever requiring a ship to leave port.

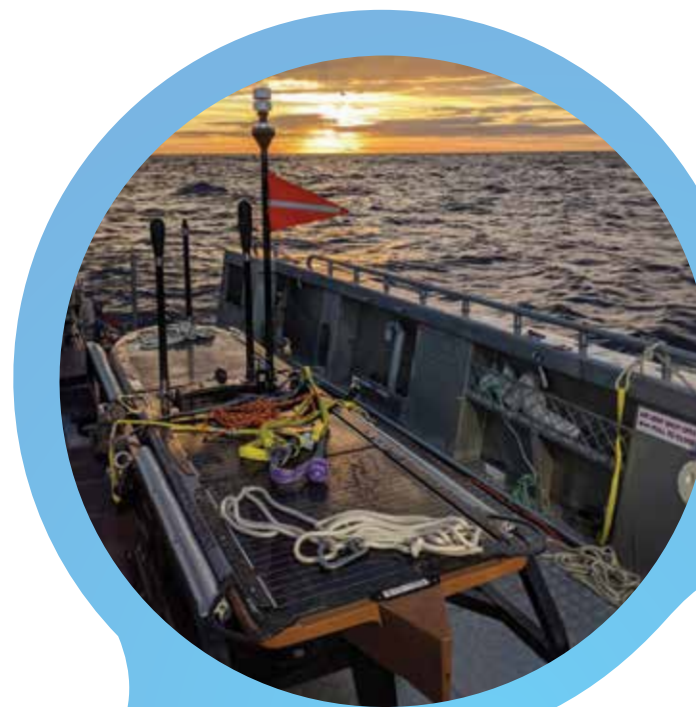
BlueZone Group is the original and most experienced distributor for Wave Gliders in Australia and has delivered a number of systems to the Royal Australian Navy. The company provides support for all aspects of Wave Glider operations and maintenance.

SEA 1770 Rapid Environmental Assessment

The Survey Craft is a key component of the Australian Navy SEA1770 project. The 9.5-metre Survey Craft is designed to provide the Royal Australian Navy with underwater hydrographic data to assist vessels with safe deployment and maneuvering in unknown maritime environments. BlueZone Group has an ongoing contract with LEIDOS to supply, integrate and support sensor suites for the Rapid Environmental Assessment.

The deployable elements of the Rapid Environmental Assessment include the Survey Craft, Fly Away Survey Kits, tide, wave, and current monitoring systems for the RAN. These capabilities will enhance the direction, collection, processing, and dissemination of tactical maritime environmental information such as Military Geospatial Information (MGI).

Additionally, the REMUS 100S is a highly successful and specialised UUV that is configured specifically for hydrographic and offshore surveys. The REMUS 100S UUV was designed to eliminate the need for larger vessels and costly handling equipment. One element of the unmanned system toolbox from the REMUS 100S was supplied for the RAN SEA1770 Rapid Environmental Assessment, due to the highly accurate seafloor surveys.



Defence Project Experience

BlueZone Group draws on more than twenty years' experience as a Defence-focused SME. The company has a track-record of high-quality performance on multiple projects for the Australian Defence Force.

AUV62-AT Intermediate Anti-Submarine Warfare Training Target

BlueZone Group is the support to Saab Australia, for the future management of operation, repair and maintenance of the AUV62-AT, Intermediate Anti-Submarine Warfare Training Target.

Using submarines as targets in Anti-Submarine Warfare (ASW) training is expensive and an inefficient use of an expensive operational asset that is often not available to support training. The AUV62-AT system can be used as a target for training surface, air and sub-surface ASW assets in any combination and can be programmed to deliver all levels of training from basic to advanced.

Landing Helicopter Dock (LHD) Communications System

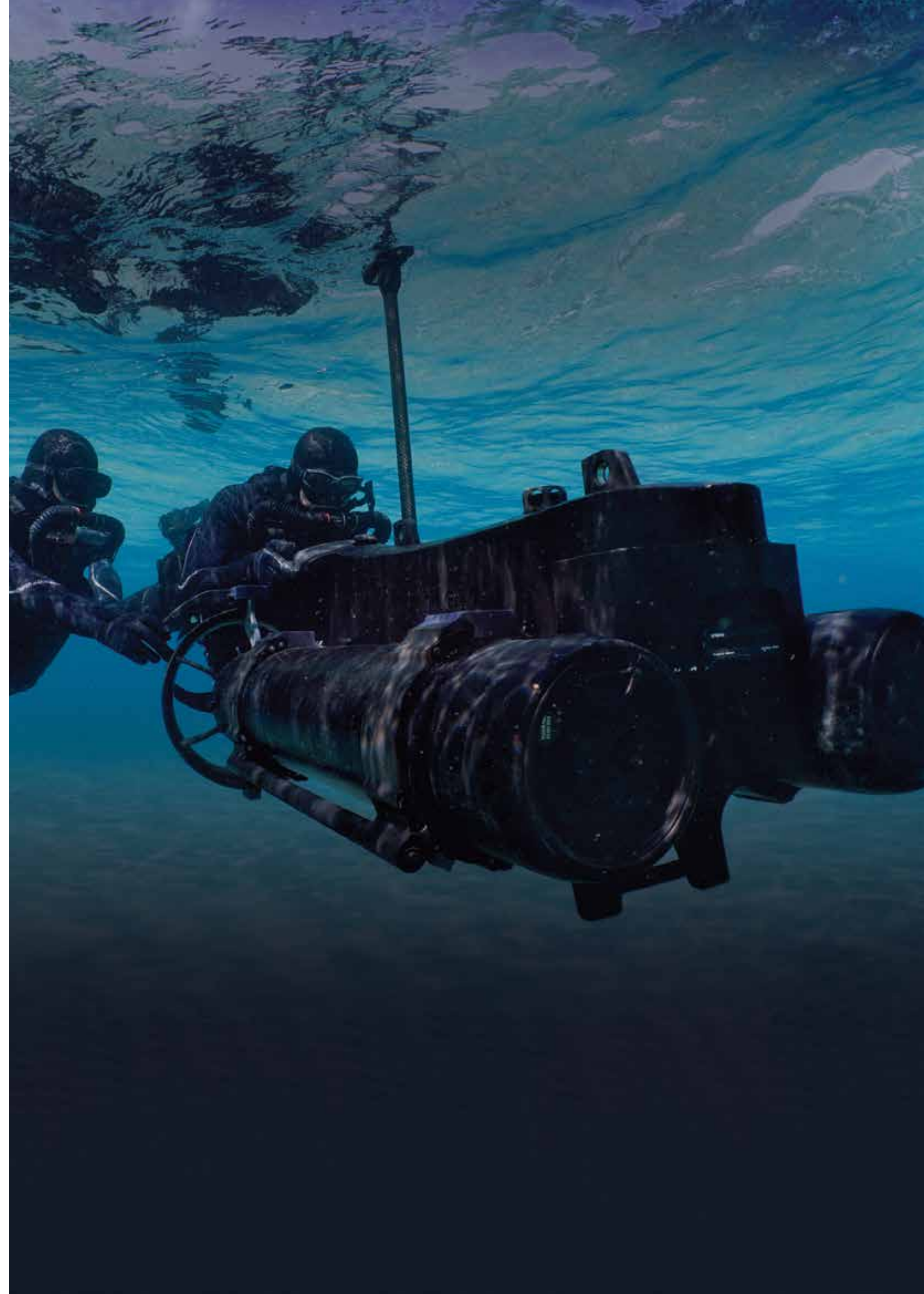
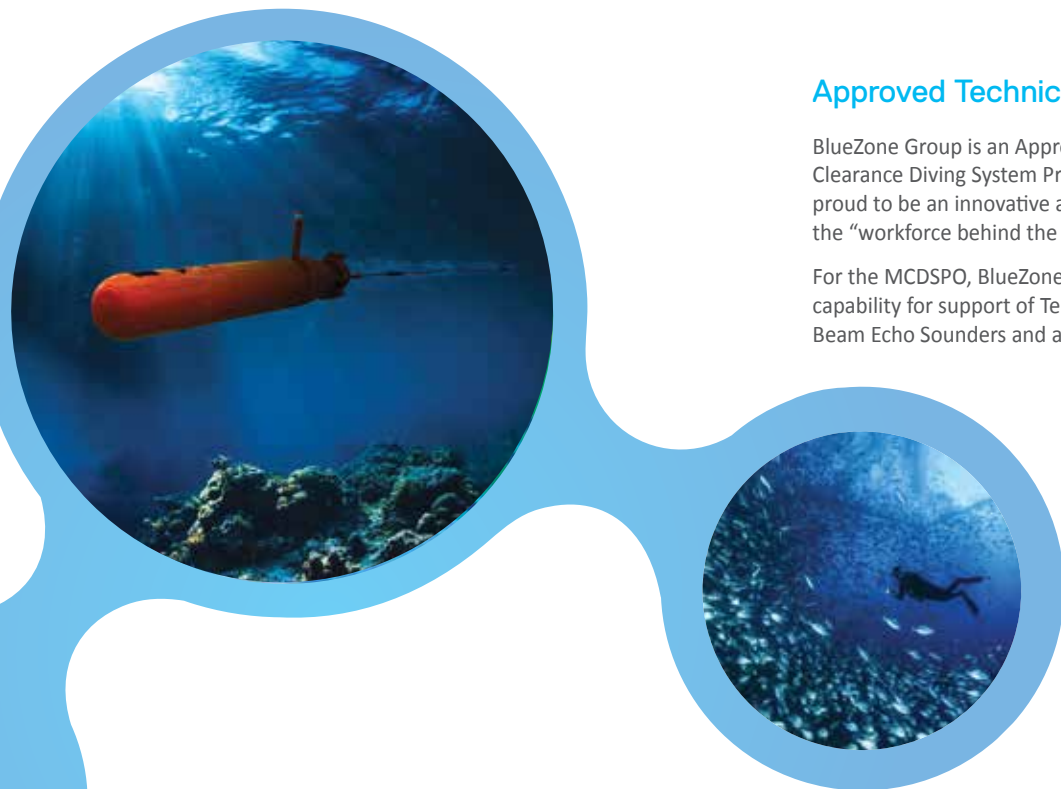
BlueZone Group supported L-3 Communications, in an important project to relocate the Landing Helicopter Dock (LHD) Communications Training Facility to a permanent home at HMAS Kuttabul at Garden Island in Sydney. The delivery of the two LHD ships to the Royal Australian Navy provided an opportunity to establish a new building to accommodate the Communications Training Facility.

Following the successful completion of the L-3 Communications Integrated Communications System component of the trainer at Contractors Temporary Training Facility at Mascot, L-3 Communications engaged BlueZone Group to relocate and rebuild the trainer in the new facility, known as the Through Life Support Facility (TLSF) at HMAS Kuttabul.

Approved Technical Support Agency

BlueZone Group is an Approved Technical Support Agency of the Mine Clearance Diving System Program Office (MCDSP). The company is proud to be an innovative and responsive Defence SME and a part of the "workforce behind the Defence Force."

For the MCDSP, BlueZone Group also provides a complete in-country capability for support of Teledyne SeaBotix ROVs and associated Multi-Beam Echo Sounders and acoustic tracking equipment.



Oceanographic/Hydrographic

BlueZone Group has been a long term supplier to the Ocean Science community and we stand behind every product that we sell - supported from our workshops in Newcastle and Perth where factory-trained technicians can complete repairs, upgrades and calibrations to meet your requirements.

Oceanographic

Now, more than ever, the importance of Ocean Science is recognised in its contribution to the understanding of the impact of climate change on our planet due to human activity. From equipment for water sampling to sophisticated ADCP buoys for long term deployment, BlueZone Group offers all types of products for Ocean Science.

BlueZone Group provides products to support professional hydrographic and geophysical survey services to the coastal engineering, port development, and maintenance and offshore oil and gas industries.

Hydrographic

BlueZone Group provides solutions for Hydrographic Survey products including Single Beam Echo Sounders, Multi Beam Echo Sounders, Side Scan Sonars and Hydrographic Survey Software. Drawing on the wide range of hydrographic survey products represented by BlueZone Group, we are able to tailor a system offer to suit your application. Industry professionals agree that hydrographic survey systems such as Multi Beam Echo Sounders must be carefully selected to provide the right solution and value-for-money for the application. BlueZone Group will work with you to determine the final use of your hydrographic data and recommended the best equipment for your budget.

Training

Hydrographic Survey Training

Our product offering is fully supported by our capability for on-the-job training at your site or using our facilities in Port Stephens NSW. Our hydrographic professionals keep up-to-date with factory visits and OEM training conducted at manufacturer sites world-wide.

Support Capability

Our nation-wide support capability, from facilities located in Newcastle and Perth, ensures that we stand behind every product we sell with Australian-based service and repair.

Teledyne RDI ADCP Verification Service

BlueZone Group has been successful in establishing the first Service Centre for Teledyne RDI ADCPs outside of the Teledyne organisation. This service capability is now receiving orders and is available for fast turn-around of ADCP equipment in Australia for fault-finding, repair, verification and maintenance.

Teledyne Marine Acoustic Imaging Service

BlueZone Group factory-trained engineers are available to assist with all types of service and support issues for products supplied by the Teledyne Marine Acoustic imaging Group including Teledyne RESON, Teledyne BlueView and Teledyne Odom.

“Teledyne RDI and BlueZone Group have enjoyed a long term relationship that is focused on spectacular customer satisfaction and initiatives such as the “ADCPs in Action Conference in Australia” which were key to supporting customers in the application of ADCPs to their work. ”

HARRY MAXFIELD, VICE PRESIDENT OF SALES & MARKETING
Teledyne RD Instruments

BlueZone Group has been a distributor for Teledyne RD Instruments for more than thirty years.



Water Resources

BlueZone Group enjoys close working relationships with the Australian river hydrology and hydrographic community, relationships that have been sustained for the past two decades, relationships based on providing excellent technical service and support. Since 1989, BlueZone Group has been at the forefront of the introduction and industry acceptance of Acoustic Doppler Current Profiler (ADCP) technology for hydrologic, hydrographic and hydrodynamic measurement applications.

River Monitoring

River monitoring supports many different activities – from determining water reserves to designing flood defences, and even to sports/leisure uses. As part of monitoring, the data collected include water currents, depth, and discharge - the net volume of water transported downstream.

After 1990, river discharge measurements changed from mechanical to acoustic instruments. For measurements made from moving boats and floats, Teledyne RD Instrument's (TRDI) river Acoustic Doppler Current Profilers (ADCP) have become the de-facto standard. The ADCP is accurate, samples rapidly, and displays discharge results as soon as the river section is complete. Rich views of the currents come from high-density sampling through the water column and along the boat path. Stemming from these advantages, TRDI has an unmatched user/experience base and a best-in-class reputation for reliable products and dependable data quality.

Products for Water Resources

Teledyne RDI's ADCP broadband technology and bottom tracking algorithms ensure that users collect the fastest most reliable data. The range of ADCPs covers all field environments.

ADCP Service and Support

BlueZone Group provides full service and support in Australia. The BlueZone Group Verification & Validation Service provides a cost effective, rapid and reliable way to determine the status of your ADCP instruments.



The Teledyne OceanScience Z-Boat is a rugged and capable platform that is ideal for river discharge measurement using an ADCP.



Energy

BlueZone Group has a long history of supporting Offshore Energy customers. BlueZone Group (formerly UVS Pty Ltd) was founded as a supply company to Australia's first Offshore Oil & Gas field in the Bass Strait. In the 1970s the company introduced the first Remotely Operated Vehicles (ROVs) to Bass Strait operations and operated the vehicles in the harsh conditions found in those waters.

Our experience and capability has grown together with the Australian Offshore Energy industry and we have always ensured that we select the best products for the use of Offshore Energy customers in the most demanding environments.

Extensive Product Catalogue

The extensive BlueZone Group Product Catalogue ensures that we can offer quality subsea products and equipment to meet a range of customer needs from supporting legacy systems to upgrading for new challenges and projects. BlueZone Group distributes products for the most respected manufacturers in subsea oil and gas and offshore energy including Teledyne, Kongsberg, Deep Sea Power & Light, SEACON and many others. Our well-trained sales team and wide product portfolio means that we can meet your needs with a fast response.

Support Capability

Our support capability, based from our facility in Perth, Western Australia ensures that we stand behind every product we sell with Australian-based service and repair. Our technical staff are highly experienced in completing fast and high quality repairs to many system types.

Slip Ring Service and Repair

BlueZone Group maintains an authorised service and repair facility for Focal Electrical and Fibre Optic Rotary Joint (FORJ) slip rings.

Working closely with Moog, BlueZone Group established a specialised room for service, repair and overhaul for slip ring units. Our experienced technicians have completed many slip ring overhauls and customers can be assured of a rapid and high quality service to manufacturer's standards. The BlueZone Group slip ring repair and service facility provides the best alternative for getting your slip ring back in service rapidly to meet original specifications.

Polyurethane Moulding Service

Our specialised Moulding Workshop provides a leading national capability for subsea and deck cable harness manufacture. Using in-house knowledge and methods developed through years of service to the subsea industry, BlueZone Group is able to complete moulding work

which will ensure trouble free operation in customer systems. The BlueZone Group polyurethane moulding service includes the capability to securely bond to all neoprene and metal shell connectors and most cable types including polyurethane, PVC, Neoprene, EPR and sealing capability to Polyethylene sheathed cables.

Subsea Trenchers

BlueZone Group designs, manufactures and supplies systems for control and monitoring of subsea trenchers developed with six successful systems deployed globally.

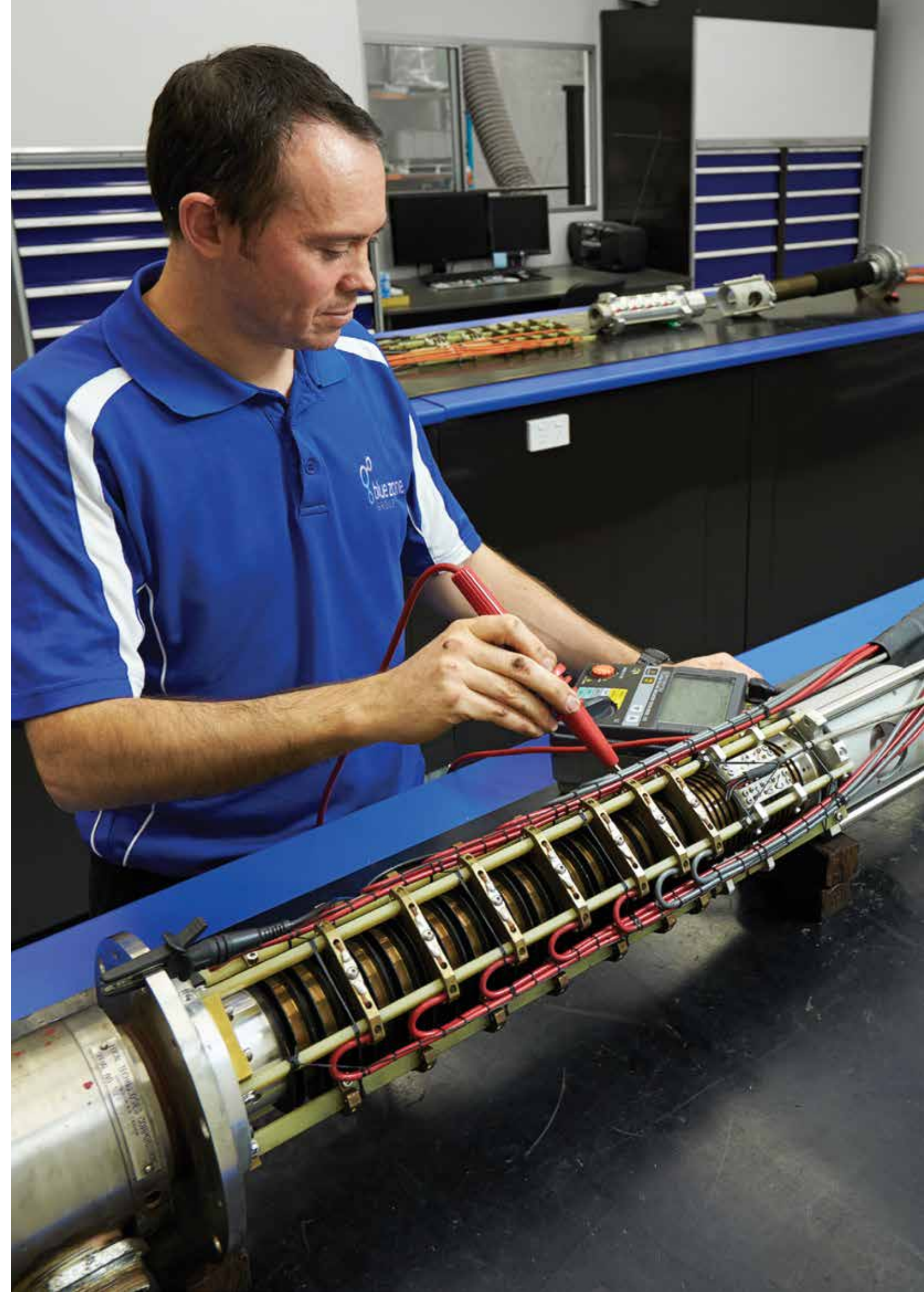
During the design phase of each system, largely based on the solid platform of previously completed projects, the use of current technology is always the primary focus. This is achieved with BlueZone Groups in-house engineering capability which continually seeks to keep abreast of new developments, as well as a strong commitment from management to pursue and develop internal R&D projects and product development where practical and beneficial to our clients.

Q7 Wind Farm, The Netherlands and St Petersburg Harbour

BlueZone Group has completed two projects for burial of subsea electrical cable: Umbilical to the Q7 wind farm in IJmuiden, The Netherlands (2007) and burial of subsea cable across St Petersburg harbour (2013).

These projects consisted of extensive control and monitoring packages for hydraulic operation, electronic monitoring, sonar and video surveillance. Each system was supplied with underwater cameras positioned to allow viewing of critical components during trenching and cable burial operations, with a series of profiling and imaging sonars incorporated to backup visual content during periods of low visibility.

Cameras used on these systems were fully manufactured in the BlueZone Group Perth workshop, using Australian components where possible. Camera and sonar images were multiplexed over a fibre optic connection to a control room.



Robotic and Autonomous Systems Engineering and Integration

BlueZone Group has strong experience in subsea and harsh environment engineering excellence dating back to the early 1980's. Our in house engineering team can assist you to quickly and cost effectively take your requirement from concept stage to operational reality, on time, on budget and all in accordance with our ISO 9001 accredited quality assurance programme.

Our focus is on Remote and Autonomous Systems (RAS) engineering for the subsea environment and our experience in this application can benefit you if you have a demanding requirement for electronic systems in any type of harsh environment.

Supplier Relationships

BlueZone Group has long term relationships with leading global suppliers. These suppliers are at the forefront of research and development and the introduction of new and innovative systems to the market. Our long-term relationships mean that we follow the development in supplier labs and we know and understand the new technology as it is introduced to market.

Our engineers and technicians are amongst the first to be trained in support for new systems. Strong communication links with supplier engineering development teams means that we can source new and innovative ideas for applying technology.

We have the depth of understanding and communication with engineering development teams to ensure that RAS systems are set to work and have the function and performance to meet the requirements of the most demanding customers.



Robotic and Autonomous Systems Engineering and Integration

Product Development

BlueZone Group product development is focused on innovative applications of new technology for our customers in subsea engineering, defence and other harsh environments.

CC02 Dual Diver CCTV System - Rack Mount

The Dual Diver CCTV System enables two person dive teams to reliably operate two video cameras and two lighting sources at depths up to 200m.

DL25 ADCP Extended Memory and Control

The DL25 Extended Memory And Control (EMAC) enables long term data logging and remote control of Teledyne RDI Channel Master ADCPs. This supports deployment of these ADCPs in remote areas where large data recording requirements exist because the instrument cannot be readily accessed.

Data logging for other ADCP types used in ocean deployments can be provided by packaging the DL25 for subsea deployment.

SEA 1770

Supply and support of a comprehensive equipment suite sourced from leading global OEMs including, but not limited to; REMUS 100 Next Generation Autonomous Underwater Vehicles (AUV), Edgetech 4200 Side Scan Sonars, Teledyne-Reson T20-P Multibeam Echo Sounders, Applanix Wavemaster II Motion Sensors, Teledyne-Odom Echotrac CV100 Single Beam Echo Sounders, Valeport Sound Velocity Sensors and Profilers, RBR Tide Gauges, Teledyne RDI Workhorse WHS600 Acoustic Doppler Current Profilers, Kailani Telemetry Buoy System.

CS24-RONII CCTV Surveillance System

Provides video from colour cameras fitted externally to the COLLINS submarine pressure hull. Design and installation of the camera system was completed from the BlueZone Group Perth office working closely with ASC.

Component Development

Through close cooperation with customers, BlueZone Group specialises in developing new components for in-service systems. Innovation in component development leads to new and improved ways to operate systems increasing the function and performance and extending system life.

Tether Connection Mk II

Unsolicited improvement developed to improve performance and changeover times in Mine Disposal Vehicle operation. Original changeover time 2-3 hours reduced to a "plug & play" solution to connecting to the Double Eagle Mk II Mine Disposal Vehicle.

Portable Operator Control Board (POCB)

The Mk 2 POCB provides the same function and performance as the original POCB but with a reduction in size and component count. The reduced size and weight allows for easy operation, handling and storage of the POCB Mk 2. The use of the latest available electronic components together with a reduction in parts count leads to increased reliability and robustness and addresses all known obsolescence issues.

ATS Transponder Mount

Design of a new location and new mount for a larger Acoustics Transponder System beacon to address an obsolescence issue. The location and new mount needed to consider a thorough risk analysis and was designed and prototyped to meet customer requirements.

Research & Development

Our commitment to Research and Development (R&D) provides innovation that drives the company forward. BlueZone Group invests in R&D, particularly ocean engineering and associated technologies, to ensure we are known as an essential contributor to Australia's ocean engineering capability, especially in the field of underwater vehicles and systems.



In 2012 ATSA received an Australian National Engineering Excellence Award for the SeaUrchin™ Marine Power Generator project. ATSA completed original engineering development of a subsea generator, constructed prototypes and completed at-sea proof-of concept and performance testing. ATSA provided project management for the complete project including leading the development team of Elemental Energy Technologies, RPC Technologies and e3k (Gilmore Engineers).

“ ... a quick note to thank you all for your involvement and efforts on the Clever Buoy.

Optus and Google are thrilled with the success of Phase 1, and the opportunities that flow for them as supporters of the project.

For our own collective parts, we delivered on the technical and testing side in complete fulfilment of our undertakings in Phase 1 and the BlueZone Team should be commended. Many thanks for your great work in Phase 1. ”

HAMISH JOLLY, DIRECTOR
Shark Attack Mitigation Systems



Capability Statement

Robotic and Autonomous Systems Engineering and Integration

Product Development

BlueZone Group applies strong project management skills to ensure that complex projects which require multiple component supplies, hardware engineering, software engineering, manufacture, assembly, test and set-to-work are delivered on time and on budget.

Examples of projects completed by BlueZone Group include:

Special Forces Submarine Surveillance

Design, manufacture and commissioning of a low-light camera network for external monitoring of COLLINS Class Submarine activities during night operations. The system consists of 4 low-light underwater cameras with an on-board monitoring and control unit for viewing and recording of activities as required. The on-board control unit provides remote viewing at various locations around the bridge and electronic warfare unit.

RON Camera System

Design, manufacture and commissioning of a Pan/Tilt/Rotate colour camera system for installation onto the COLLINS Class Submarine fleet. Seven systems in total, designed to allow for flexible external viewing of mast, periscope and general operations. A colour camera was mounted onto the fin of each submarine with a monitoring and control unit installed in the bridge to allow for control of the Pan & Tilt functionality as well as for local viewing and recording of images.

External outputs were also made available for routing of video to other submarine locations such as the sailor mess and captain quarters.

Subsea Trenchers

Two projects: Burial of subsea electrical umbilical to the Q7 wind farm in IJmuiden (2007) in the Netherlands and burial of subsea cable across St Petersburg harbour (2013). These projects consisted of extensive control and monitoring packages for hydraulic operation, electronic monitoring, sonar and video surveillance. Each system was supplied with underwater cameras positioned to allow viewing of critical components during trenching and cable burial operations, with a series of profiling and imaging sonars incorporated to backup visual content during periods of low visibility. Cameras used on these systems were fully manufactured in our Perth workshop, using Australian components where possible. Camera and sonar images were multiplexed over a fibre optic connection to a control room. The system was controlled and monitored electronically using an in-house designed SCADA system providing switching and recording functionality, in conjunction with detailed electronic data and animated graphics.

Subsea Electronics Module (SEM)

Many clients have the need to house electronics for operation at great depth or in harsh environments. BlueZone Group has developed proven designs for SEM housings and has the experience to specify, manufacture and test for your requirement. Many SEM projects have been completed for various customers including: Trunk Line Plough, developed for Woodside Petroleum; Carnegie Wave Energy CETO Perth Wave Energy Project.

“SeaUrchin” Marine Power Generator

The SeaUrchin Marine Power Generator project was awarded a 2012 National Engineering Excellence Award by Engineers Australia. A highly effective engineering development team was formed to design the SeaUrchin™ generator, develop the prototype and complete proof-of-concept and performance trials. Overall Project Management was provided using skills and capabilities developed as an SME working on provision of support for strategic capabilities to the Royal Australian Navy.

Optus “Clever Buoy”

BlueZone Group completed development of the world-first Optus “Clever Buoy”, an innovative device for detection of sharks at beaches. In twelve weeks, BlueZone Group rapidly assembled a skilled engineering team that took the concept from the whiteboard to at-sea testing and global launch. The Clever Buoy integrates a sonar detection system, interface software, battery power and communications systems in one rugged buoy that can be deployed at beaches around the coastline.



Newcastle (Head Office)

21 Huntingdale Drive
Thornton, NSW 2322, Australia

PO Box 3022
Thornton NSW 2322

Tel: +61 (0)2 4964 3500

Perth

Unit 1, 41 Discovery Drive
Bibra Lake, WA 6163, Australia

PO Box 1337
Bibra Lake, WA 6965

Tel: +61 (0)8 6595 1500