MerLion Advisory Group
Transforming Maritime Security

Water covers 70 percent of the earth's surface, with over 95 percent of the earth's water in its oceans. The vast expanse of the ocean is home to critical assets and operations for governments and industry while simultaneously being a resilient ecosystem to our global marine resources. The diversity of challenges found in this complex environment and the range of actors and stakeholders involved mandate focused, efficient, and cost-effective solutions to ensure viability for generations to come. Consequently, strategies and planning across disciplines of the maritime sector are critical to safeguarding both the ocean environment and those dependent upon it from potential existential threats.

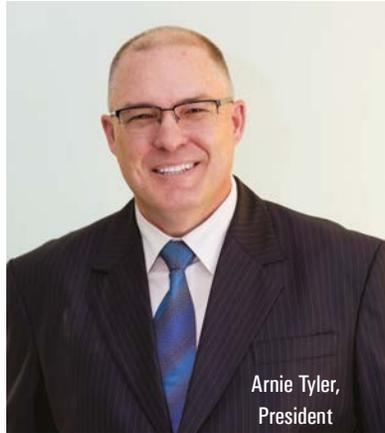This is where MerLion Advisory Group can help.

> **We are revolutionizing the way we monitor and secure our waters. Using our advanced technology, we can provide unparalleled visibility above and beneath the surface, reducing the need for human personnel to ensure the safety and security of the Maritime industry**

As a top maritime strategic advisory firm, MerLion offers a comprehensive approach to Maritime Domain Awareness and Response (MDA&R) operations to governments, companies, and investors around the globe. MerLion drives a people-focused and performance-based approach to support risk management efforts. This starts with a thorough needs assessment and leads to a tailored, comprehensive strategy to mitigate risk and cost while providing enhancements in maritime safety, security, and environmental management practices.

"Our objective is to revolutionize the way we monitor, secure, and respond to situations and conditions of this critical global resource. Using advanced technologies, we can provide unparalleled visibility above and beneath the surface, reduce the human operational footprint, and facilitate maritime industry safety, security, and long-term viability," says Arnie Tyler, President, MerLion.

MerLion improves MDA&R capabilities by integrating Artificial Intelligence and Machine Learning (AI/ML) technologies into its' unmanned systems. This approach is

Arnie Tyler, President

efficient and effective by putting machines "on-point" doing surveillance and monitoring while keeping personnel fresh, trained for appropriate responses, and aware of their whole "720-degree" operating area that envelopes a bubble of awareness above, on and below the surface. It allows for fewer personnel and a smaller logistics presence than historical manned crews onboard large maritime assets. The result? Better awareness with fewer personnel, mitigated exposure to personnel, focused training for human-specific functions, and better profits.

Technology can help address shortages in available human resources, assist in navigating hazards from sediment or wrecks, counter Illegal Unreported Unregulated (IUU) fishing, identify chemical releases, and foil criminal activity, to name a few advantages. There are many other opportunities as well; integrating sonar systems and water chemistry sensors to profile waterways before, during, and after dredging will optimize ecosystem performance. Employing advanced acoustic systems to detect man-made and marine-life noise underwater will aid in resource management. The objective in each case is to detect contacts or conditions earlier and with more clarity, so humans have more time to assess a potential threat, then respond smarter with more time to mitigate impact.

While MerLion prioritizes green technology and is exploring blockchain cyber security communications, they still leverage over 150 years of experience to facilitate smart human responses on the water. This includes training patrol boat operators in assessment, interdiction, and rescue actions while employing AI/ML-assisted command and control functions of a Maritime Operations Center (MOC). Technology here manages data (over) load while providing responding operators the best awareness and threat definition, whether it be an armed intrusion, chemical spill, or reckless boaters placing themselves in harm's way.

MerLion's competitive advantage is not just its technology; it is also the company's approach to maintaining relationships. Its diverse and highly experienced team works closely with partners to define and solve challenges while mitigating risk. MerLion's 720-degree view of potential threats, coupled with a highly experienced leadership team, makes it a leader in maritime safety, security, and ecosystem management. *AD*