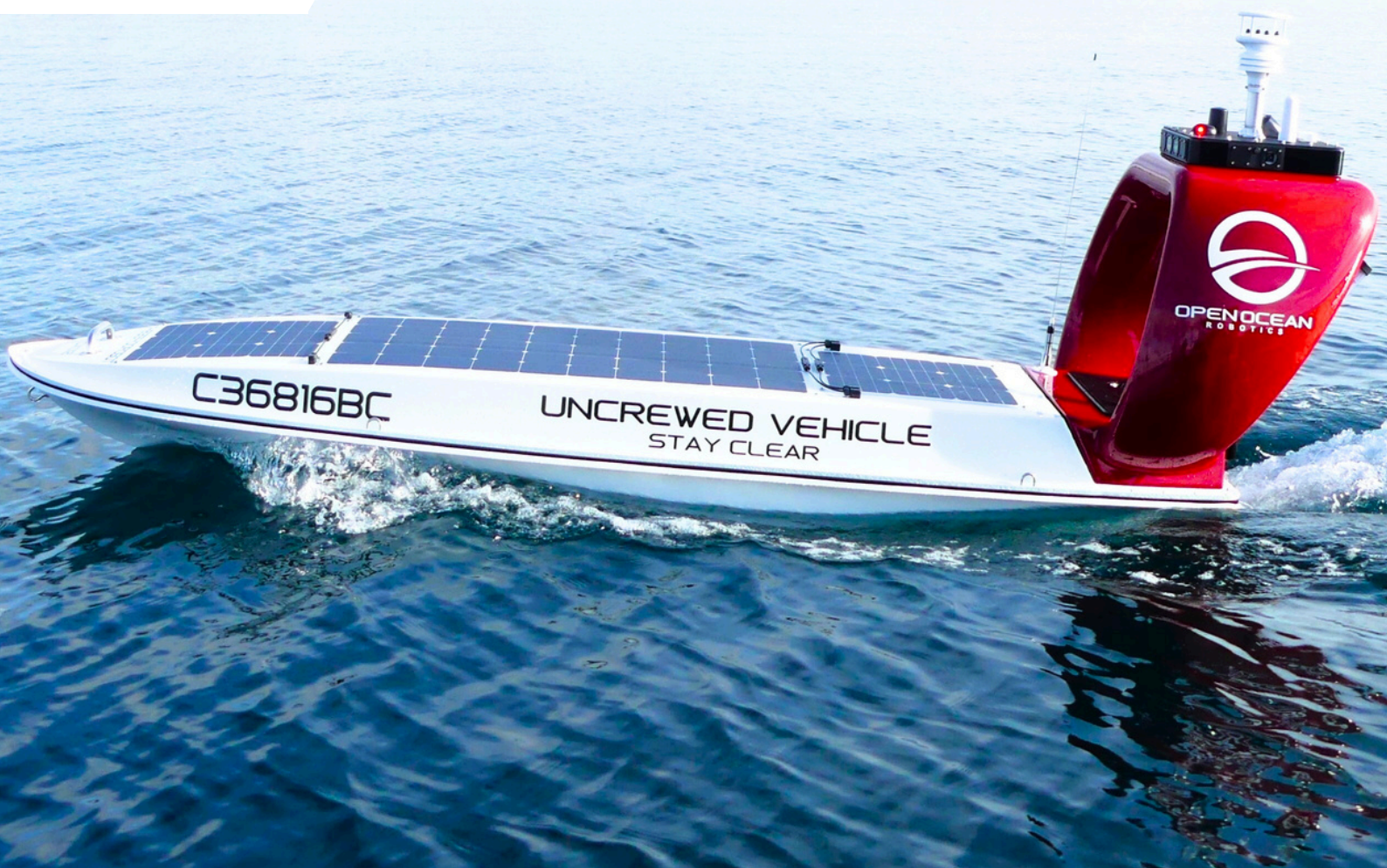




AUTONOMOUS UNCREWED SURFACE VEHICLES DELIVERING MARITIME SECURITY & OCEAN DATA

Open Ocean Robotics pioneers autonomous ocean intelligence, delivering high-quality maritime data and real-time awareness with their solar-powered uncrewed surface vehicles (USVs).

The Journey So Far

Open Ocean Robotics collects critical ocean data using their patented, solar-powered uncrewed surface vehicles equipped with advanced sensors, cameras, and real-time communications. Their USVs operate in the world's most challenging waters, strengthening maritime security while advancing environmental understanding.

They provide a safer, more effective and more affordable way for organisations in maritime security (coastal surveillance, illegal fishing enforcement) and environmental missions (wildlife monitoring, climate data), to gain ocean insights, transforming how they study, protect and operate on the ocean.

In 2025, Open Ocean Robotics signed a new service contract with Singapore's Defence Science and Technology Agency (DSTA) to work with their uncrewed surface vehicle (USV), the solar-powered, low-profile DataXplorer™, in Singapore. This collaboration explores the potential for high-endurance, zero-emission USVs to support defence and dual-use applications in complex coastal environments.

They also collaborated with MPA on a Multi-Agency Chemical Spill Simulation Exercise in 2025, using DataXplorer to monitor air quality in hazardous conditions. The deployment kept response personnel out of harm's way while maintaining critical monitoring capabilities. Separately, Open Ocean Robotics also conducted sea trials in Singapore port waters to test the feasibility of their USV across a range of maritime use cases.

Innovation Opportunity

Maritime operations today remain heavily reliant on crewed vessels, which are costly and fossil fuel-intensive. At the same time, there is a growing need for persistent ocean monitoring to address challenges such as illegal, unreported, and unregulated fishing, maritime domain awareness gaps, and climate-driven environmental change.

The opportunity lies in enabling scalable, long-duration ocean presence through autonomous systems that can continuously collect and transmit actionable data, without the logistical and environmental constraints of traditional approaches.

Solution

Open Ocean Robotics addresses this need with its DataXplorer™ USV platform, a fully solar-powered, zero-emission vessel capable of multi-week deployments. Equipped with modular sensor payloads, AI-enabled detection systems, and real-time data streaming via the XplorerView™ mission control portal, the platform delivers continuous maritime awareness and environmental intelligence.

Key capabilities include autonomous navigation, vessel detection and classification, acoustic monitoring, and live data transmission to shore. This allows operators to monitor vast ocean areas, respond to emerging threats, and make informed decisions in real time, all while reducing operational costs and environmental footprint.

Pilot Project Key Results

Avoided over 3,919 tonnes of greenhouse gas emissions through zero-emission USV operations, replacing traditional fuel-powered vessels.

Enabled monitoring of more than 5,286,187 hectares of Marine Protected Areas (MPAs), supporting conservation, compliance, and maritime security efforts.

Delivered multi-week autonomous deployments with continuous real-time vessel detection and tracking, enhancing port security and offshore asset protection without crewed patrols.

Founded 2018, Canada

“From the beginning, our goal has been to better understand and protect the ocean by making high-quality data more accessible and sustainable to collect. Operating in marine environments is inherently complex, and traditional approaches often limit how long and how effectively we can monitor these spaces. By developing autonomous, solar-powered systems, we've been able to extend our reach and provide continuous, real-time insights. This not only supports environmental monitoring, but also strengthens awareness around critical marine infrastructure and operations. We believe that with the right data, delivered at the right time, we can enable smarter decisions that benefit both the ocean and those who rely on it.

Julie Angus,
Co-Founder & CEO

Looking Forward

Open Ocean Robotics is advancing toward scalable fleet deployments to support coordinated monitoring across ports, coastal regions, and offshore infrastructure. By advancing AI-driven analytics, expanding sensor integrations, and strengthening global partnerships, the company aims to provide comprehensive maritime domain awareness and environmental intelligence at unprecedented scale.

As demand grows for sustainable and persistent ocean data, Open Ocean Robotics is positioned to support governments, defence organizations, and industry partners in building safer and more secure oceans.