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EMERGING SPACE BRIEF

Autonomous Maritime Systems

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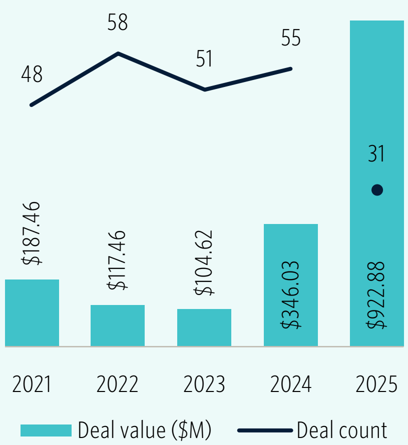
Trending companies

SARONIC, SAILDRONE, XOCEAN, BLUE WATER, OCEAN AERO, bedrock

Autonomous maritime systems VC deal activity



Source: PitchBook • Geography: Global
As of September 15, 2025

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Overview

Autonomous maritime systems are uncrewed surface, subsurface, and hybrid platforms that navigate, sense, and execute missions with onboard autonomy, remote supervision, or both. By combining endurance-optimized hulls with modular payloads and advanced autonomy stacks, they enable persistent, low-risk, and cost-effective operations across defense, commercial, and scientific domains. Once limited to niche prototypes, these systems are now central to how navies project power, how offshore industries inspect and secure assets, and how scientists collect data in extreme and remote environments.

Several forces are driving this transition: defense ministries facing contested waters and workforce constraints, energy companies racing to scale offshore wind and protect subsea cables, and research institutions demanding continuous climate and ecosystem monitoring. Technology has matured at the right moment, with AI autonomy stacks capable of complying with the Convention on the International Regulations for Preventing Collisions at Sea (COLREGs), renewable propulsion extending missions to months, and advanced sensors delivering high-fidelity situational awareness above and below the surface. Venture activity reflects this maturation: Capital invested dipped from about $117.5 million in 2022 to $104.6 million in 2023, then accelerated to $346.0 million in 2024 before reaching $922.9 million in just the first half of 2025. While endurance, regulation, and cost remain hurdles, the trajectory points to autonomous maritime systems becoming critical infrastructure for both security and the global blue economy.

Background

The idea of uncrewed vessels at sea is not new. Navies experimented with remote-controlled boats during World War II, often for minesweeping or target practice, and the offshore oil & gas industry began using tethered remotely operated vehicles in the 1970s to inspect subsea infrastructure. For decades, these systems were seen as specialized tools, useful in narrow contexts but far from mainstream. What has changed is the convergence of autonomy, sensing, and communications technologies that allow vessels to operate reliably and independently for extended periods of time.

The importance of autonomous maritime systems today comes from both geopolitical and economic pressures. Naval forces face contested waters and budget constraints, and they need a persistent presence without putting sailors at risk. Offshore wind, subsea cables, and critical energy infrastructure require constant monitoring and inspection that is difficult and expensive with traditional ships. Researchers need new ways to gather climate and oceanographic data at scale, especially as the effects of climate change accelerate. These drivers align with a broader shift in investment toward defense and dual-use autonomy, and they explain why capital is now flowing into the sector at record levels.

In short, the technology matters now because the stakes in the maritime domain are higher than ever. Oceans are the arteries of global trade and energy, they hold the key to climate knowledge, and they are increasingly contested militarily. Autonomous maritime systems offer a way to extend reach, reduce risk, and lower cost across all these domains, which is why the sector has moved from experimental to strategic in just a few years.

Timeline of autonomous maritime systems

- **1940s:** Early naval experiments with remote-controlled boats for minesweeping and target practice during World War II
- **1970s:** Offshore oil and gas operators adopt tethered remotely operated vehicles (ROVs) for subsea inspection and repair
- **1990s to 2000s:** Rise of autonomous underwater vehicles (AUVs) in research and defense, used for mapping and mine countermeasures
- **2010s:** First ocean-crossing trials of autonomous surface vessels, including prototypes such as Liquid Robotics' Wave Glider and Saildrone's early missions
- **2020s:** Convergence of AI autonomy, renewable propulsion, and satellite communications. VC-backed startups such as Saildrone, Saronic, Bedrock, and Seasats scale operations, while defense and energy sectors embrace the technology
- **2025 and beyond:** Sector matures into strategic infrastructure for navies, offshore industries, and climate science, with billion-dollar startups and dedicated production shipyards

Technologies and processes

Autonomous maritime systems depend on a combination of advances in robotics, AI, and marine engineering. The technology stack can be broken into several core areas: navigation & control, sensing & perception, communications, power & propulsion, and the processes that enable launch, recovery, and integration into operations.

Navigation & control are the foundation. Modern vessels use AI-driven autonomy software that allows them to follow routes, avoid collisions under international maritime rules, and adapt to changing sea conditions. Some systems are fully autonomous, while many operate in semi-autonomous modes where remote supervisors can intervene if needed. The trend is toward greater autonomy as software and validation improve.

Sensing & perception give these platforms awareness of their environment. Surface vessels often carry radar, cameras, and automatic identification service receivers, while subsurface vehicles rely on side-scan and multibeam sonar to map and detect objects. Increasingly, these sensors are paired with machine learning models that can classify vessels, identify anomalies, and produce actionable data for operators.

Communications remain a critical challenge. On the surface, vessels can use line-of-sight radio, cellular near shore, and satellite links for global connectivity. Underwater, where radio and GPS do not penetrate, vehicles use inertial navigation and acoustic modems to exchange limited data until they resurface. These constraints explain why many missions are designed to run largely autonomously between check-ins.

Power & propulsion determine endurance. Surface systems have an advantage because they can harvest solar or wind energy to remain at sea for months at a time. Underwater vehicles are mostly battery-powered, which limits mission duration to hours or days, although innovations in docking stations and hybrid concepts are extending that range. Hybrid vehicles that can both sail on the surface and dive underwater are emerging as a way to blend endurance with stealth.

Finally, launch, recovery, and operational processes are evolving. Some surface craft can depart from and return to port without human crews, while underwater vehicles often need support vessels for deployment and retrieval. Several companies are working on autonomous docking and support concepts to reduce the need for crewed ships. Just as important is the data pipeline: Raw sensor feeds must be processed, uploaded, and delivered in usable formats. Many startups now offer cloud platforms that turn mission data into maps, alerts, or dashboards for end users.

Technology area	Description	Example companies/systems
Navigation & control	AI autonomy stacks for routing, COLREGs compliance, and semi-autonomous remote oversight	Sea Machines (autonomy kits), Orca AI (collision avoidance), Buffalo Automation (AutoMate)
Sensing & perception	Multi-sensor payloads, including radar, sonar, optical, and machine language-based detection	Bedrock (AUV mapping sonar), Saildrone (weather & surveillance sensors), Terradepth (Absolute Ocean data platform)
Communications	Satellite, radio, and acoustic links enabling remote supervision and swarm coordination	Vatn Systems (AUV swarm communications), Saildrone (Iridium/Starlink), Ocean Aero (hybrid AUSV acoustic relays)
Power & propulsion	Renewable and hybrid power systems to extend endurance	Saildrone (wind and solar), Seasats (solar USVs), Nauticus (electric AUVs), Ocean Aero (surface/underwater hybrid)
Launch, recovery & data	Autonomous deployment, docking, and cloud data platforms	Bedrock (Mosaic cloud), Nauticus (Hydronaut tender and Aquanaut), XOcean (survey-as-a-service)
Implementation & governance	Integrates multiple data sources, cleans and analyzes data, and delivers insights through dashboards and communications. Ethical data governance and continuous feedback loops ensure effectiveness.	

Applications

Autonomous maritime systems are designed to take on the dull, dirty, and dangerous tasks that conventional vessels and human crews struggle to perform cost-effectively or safely. Their versatility across surface and subsurface domains means they are now being deployed in defense, commercial industry, scientific research, and environmental monitoring.

Defense & security: Defense remains the leading driver of adoption. Navies are using uncrewed surface vessels (USVs) and AUVs for intelligence, surveillance, reconnaissance, and persistent patrols in contested waters. Mine countermeasures, antisubmarine warfare, and electronic warfare are emerging as priority missions. Programs such as the US Navy’s Ghost Fleet Overlord and DARPA’s Manta Ray AUV illustrate how uncrewed craft can extend naval reach at lower risk. Startups such as Saronic are developing medium and large autonomous warships intended to operate alongside crewed combatants, while smaller firms provide ISR-focused drones for base security and maritime domain awareness. NATO allies are also integrating uncrewed craft into mine hunting and infrastructure protection, especially around subsea cables and pipelines.

Maritime security & law enforcement: Uncrewed platforms are well-suited for coast guard, customs, and port security missions. Saildrone and similar companies have demonstrated how fleets of small USVs can patrol exclusive economic zones and detect illegal fishing or trafficking. Ports and harbors are experimenting with drone boats for hull inspections, contraband detection, and continuous perimeter monitoring. These use cases align with growing demand for persistent, cost-effective maritime domain awareness outside of purely military contexts.

Scientific research & oceanography: Scientists value uncrewed vessels for their ability to collect climate and environmental data continuously in remote or dangerous conditions. Saildrone's vehicles have sailed into the eye of hurricanes and across the Arctic, gathering meteorological and oceanographic measurements that were previously inaccessible. Underwater, startups such as Bedrock and Terradepth use AUVs to map the seafloor at high resolution, supporting projects such as Seabed 2030. These capabilities are critical for understanding climate change, tracking biodiversity, and expanding fundamental knowledge of the ocean.

Offshore energy & infrastructure: The energy sector is adopting autonomous systems to reduce costs and risks. AUVs now survey subsea cable routes, offshore wind farm sites, and pipeline corridors, replacing expensive crewed survey ships. Nauticus Robotics is working with Shell on subsea integrity monitoring, while Bedrock markets its AUVs as a lower-cost alternative to conventional survey vessels. USVs are also being used for spill response, environmental baseline monitoring, and security patrols around offshore platforms. As offshore wind capacity expands globally, demand for robotic survey and monitoring services is expected to rise significantly.

Maritime transport & logistics: Autonomy is also beginning to touch the commercial shipping sector. Companies such as Sea Machines and Orca AI provide autonomy kits and decision-support systems for tugs, ferries, and cargo ships. Demonstration projects like Norway's Yara Birkeland electric container ship and the Machine Odyssey trial by Sea Machines show progress toward autonomous short-sea shipping. In ports, autonomous tugs and pilot vessels could handle routine logistics, while robotic barges may eventually serve in cargo transport along coastal routes.

Search, rescue & disaster response: Small uncrewed vessels can support emergency operations by searching for survivors, delivering flotation devices, and relaying communications in hazardous conditions. They are also being tested for ice reconnaissance in the Arctic and for monitoring debris and oil spills after hurricanes. Because they can be prepositioned and deployed rapidly, they offer clear advantages in disaster-prone regions.

Environmental & resource monitoring: Governments and nongovernmental organizations (NGOs) are increasingly turning to autonomous systems to monitor water quality, track pollution, and protect fisheries. Drones can quietly patrol marine protected areas, detect illegal fishing, or monitor whale migrations without disturbing ecosystems. They are also being considered for carbon monitoring projects, such as verifying blue carbon storage or tracking subsea carbon capture initiatives.

The breadth of applications highlights why autonomous maritime systems are attracting both government and commercial investment. Defense procurement may dominate in the near term, but commercial adoption in offshore wind, subsea infrastructure, and environmental monitoring is expected to grow rapidly. The common thread across all domains is persistence, safety, and cost efficiency, which allow these systems to expand the reach of human operators into the most challenging environments on Earth

Application area	Use cases	Example companies/systems
Defense & security	Naval ISR, mine countermeasures, antisubmarine warfare, uncrewed warships	Saronic (armed USVs), Sea Machines (autonomy kits for DoD), Vatn Systems (AUV swarms), Anduril (Dive-LD large AUV)
Maritime security & law enforcement	EEZ patrols, illegal fishing detection, port/harbor security	Saildrone (MDA & border patrol), OceanAlpha (Chinese USVs for water patrol), Seasats (coastal ISR)
Scientific research & oceanography	Climate monitoring, hurricane data, seabed mapping	Saildrone (hurricane and Arctic missions), Bedrock Ocean (seafloor mapping AUVs), Terradepth (Absolute Ocean data platform)
Offshore energy & infrastructure	Wind farm surveys, pipeline inspection, subsea monitoring	Nauticus Robotics (Aquanaut AUV), Bedrock Ocean (survey-as-a-service), XOcean (hydrographic survey USVs)
Maritime transport & logistics	Autonomous cargo vessels, ferries, tugboats	Sea Machines (SM300, Machine Odyssey trial), Orca AI (collision avoidance for shipping), Buffalo Automation (AutoMate ferry autopilot), Yara Birkeland (autonomous container ship demo)
Search & rescue/disaster response	Survivor search, oil spill mapping, ice reconnaissance	Sea Machines and Hike Metal (SAR craft), Canadian Coast Guard (Arctic USV tests), Saildrone (post-hurricane surveys)
Environmental & resource monitoring	Pollution tracking, fisheries enforcement, wildlife monitoring	Saildrone (illegal fishing detection), Blueye Robotics (aquaculture ROVs), NGO/NOAA partnerships (marine conservation patrols)

Limitations

While autonomous maritime systems have advanced rapidly, several limitations and challenges continue to shape how quickly they can scale. These range from technical barriers to regulatory uncertainty and operational integration.

Endurance and energy constraints: Surface drones that use solar, wind, or hybrid propulsion can operate for months, but biofouling and severe weather eventually limit their endurance. Underwater systems face even tighter constraints. Most AUVs run on batteries that last from several hours to a few days. Docking and underwater charging concepts are in development but remain in early stages. Until endurance improves, many underwater missions will require frequent recovery and redeployment, raising operational costs.

Communications and control: The maritime environment makes reliable communications difficult. Surface drones can use satellite links, but bandwidth is limited and latency is high. Operators must design missions to tolerate long delays or outages. Underwater drones have even less capacity, often relying on slow acoustic modems or surfacing periodically to upload data. These constraints mean systems must carry significant onboard autonomy and decision-making but also leave them vulnerable to being cut off at critical moments. Cybersecurity is another dimension of this challenge. Without hardened encryption and antijamming measures, uncrewed systems could be spoofed or hijacked, a risk that becomes more serious in defense contexts.

Regulatory and legal hurdles: International maritime law has not fully adapted to the rise of uncrewed vessels. Current rules require ships to maintain a lookout, something that historically assumed a human crew. Whether an AI system qualifies is unresolved. Liability in case of accidents is also unclear. If an uncrewed vessel collides with another ship or causes environmental harm, it is not obvious who bears responsibility: the operator, the manufacturer, or the software provider. Insurance underwriters remain cautious, slowing adoption. Some countries have permitted trials in designated zones, but there is no globally consistent framework for widespread commercial operations.

Reliability and risk perception: The ocean is an unforgiving operating environment. High seas, corrosive saltwater, marine growth, and storms all test the resilience of vehicles. Failures that would be minor on land can become catastrophic at sea. Building public and customer trust requires a strong safety record, but the industry is still young. A single high-profile mishap could set back confidence. Stakeholders in navies, shipping firms, and energy companies need assurance that autonomous vessels will not become hazards themselves.

Operational integration: Deploying maritime drones is not just a technical matter. Organizations must build new processes, from remote operations centers to data handling and maintenance protocols. Personnel need to be trained to supervise fleets and to interpret and act on the data they generate. Integrating drones into mixed fleets with crewed vessels creates new coordination challenges. Labor concerns are another factor. Maritime unions have raised objections to fully autonomous shipping, citing safety and job losses, and their resistance could shape regulatory outcomes.

Economics and scalability: Although uncrewed systems promise cost savings over time, the upfront capital requirements remain high. Sophisticated AUVs or USVs cost millions of dollars, and building fleets at scale requires major investment in production and support infrastructure. Many startups rely on service-based business models, meaning they must carry the cost of building and operating their fleets while earning revenue incrementally from contracts. This capital intensity makes them dependent on continuous fundraising or strategic partnerships.

In short, autonomous maritime systems are not yet turnkey solutions. They still face endurance limits, communications gaps, regulatory ambiguity, and integration hurdles. These challenges do not erase the opportunity, but they explain why scaling from demonstration missions to full fleets is a stepwise process. Each year brings progress, from improved batteries to regulatory pilots, yet the sector will need time and careful execution to prove itself as a safe, reliable, and indispensable layer of maritime infrastructure.

Recent deal activity and market outlook

Venture investment in autonomous maritime systems has accelerated sharply since 2023, moving from scattered seed checks to late-stage megadeals. Saronic is the defining case: Founded in 2022, it raised $175 million in July 2024 at a $1 billion valuation and then stunned the market with a $600 million Series C in February 2025 at a $4 billion valuation. With $845 million raised in less than three years, Saronic is now building a dedicated shipyard for medium and large USVs. On the commercial and dual-use side, Saildrone has scaled its model of ocean data-as-a-service, raising $100 million in 2021 and another $60 million in May 2025, led by Denmark's sovereign fund EIFO to expand European ISR and infrastructure monitoring. Other notable financings include Bedrock Ocean's $25 million Series A-2 in June 2025 to scale its AUV fleet, Sea Machines' $10 million Series C extension in March 2025, and Vatn Systems' $13 million seed in late 2024 with Lockheed Martin Ventures, RTX Ventures, and In-Q-Tel as backers.

Contract activity shows that governments are backing these companies with real procurement dollars. In 2021, the US Department of Defense awarded Sea Machines a $3.1 million contract to prototype autonomous replenishment barges. Belgium and the Netherlands committed approximately €2 billion for mine countermeasure vessels centered on uncrewed systems, while the UK Royal Navy has introduced USVs into its Mine and Hydrographic Capability program. DARPA's Manta Ray extra-large unmanned undersea vehicle (XLUUV) completed full-scale in-water trials in 2024 and is expected to transition to the Navy, creating downstream demand for advanced undersea autonomy. These contracts, alongside NATO's REP(MUS) exercises, are pulling startups directly into operational defense ecosystems.

Government budgets confirm the scale of the opportunity. The US Navy's fiscal year 2025 request included $54 million for large USVs, $101.8 million for medium USVs, $92.9 million for enabling capabilities, and $21.5 million for XLUUVs, with procurement funding ramping from fiscal year 2027 onward. Plans call for the first large USV to be procured in fiscal year 2027 at $497.6 million, two more in fiscal year 2028 at $652.8 million combined, and three in fiscal year 2029 at $994.3 million combined. XLUUV procurement is programmed at one per year from fiscal year 2026 through fiscal year 2029 at roughly $113 million to $120 million each. This creates a multibillion-dollar procurement pipeline for uncrewed surface and undersea systems through the end of the decade.

Strategic partnerships are equally important. Sea Machines and Rolls-Royce are collaborating to integrate autonomy into commercial and naval platforms. Nauticus Robotics is working with Shell on subsea inspection and data services. Saildrone partnered with Crowley Maritime to deliver government contracts, while Bedrock Ocean is aligned with NOAA for Seabed 2030 mapping. Corporate venture investors such as Lockheed Martin Ventures, RTX Ventures, and In-Q-Tel are backing startups directly, creating capital plus procurement pathways.

Outlook

The convergence of rising venture flows, contract awards, and clear government budget wedges positions the sector for sustained growth. Defense will anchor demand as navies build uncrewed flotillas, while offshore wind, subsea infrastructure, and environmental monitoring will drive commercial adoption. The next five years are likely to bring industry consolidation as primes and corporates acquire startups to secure autonomy IP, making autonomous maritime systems one of the most strategically important dual-use markets of the decade.

Quantitative perspective

227 companies	**582** deals	**621** investors	**$5.05B** capital invested
69 deals (TTM) 25.45% YoY	**$5.38M** median deal size (TTM) 290.93% YoY	**$48.85M** median post-money valuation (TTM) 9.71% YoY	**$1.07B** capital invested (TTM) -0.90% YoY

As of September 15, 2025

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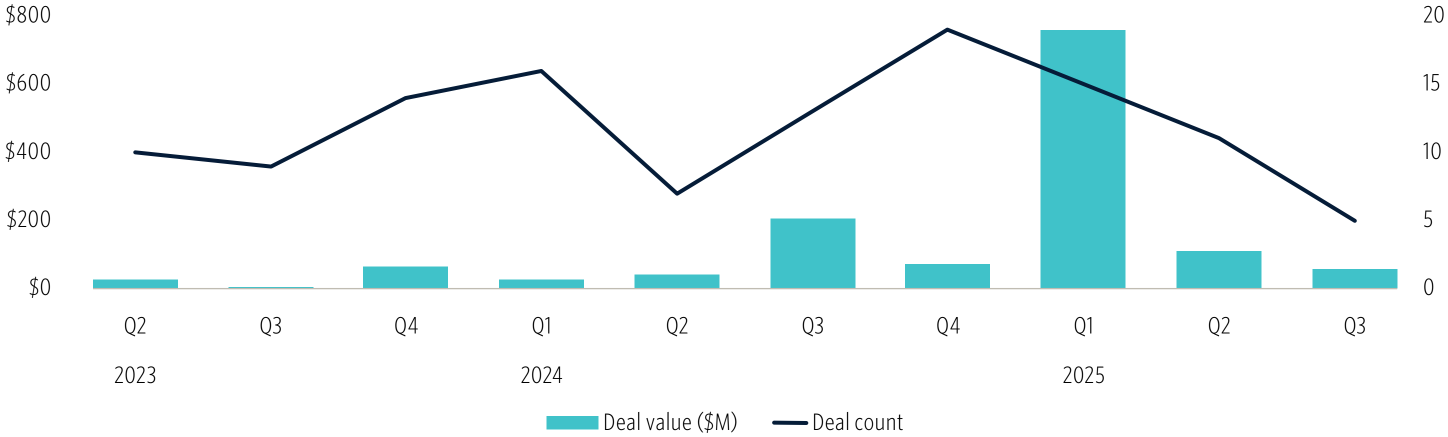
Autonomous maritime systems VC quarterly deal activity

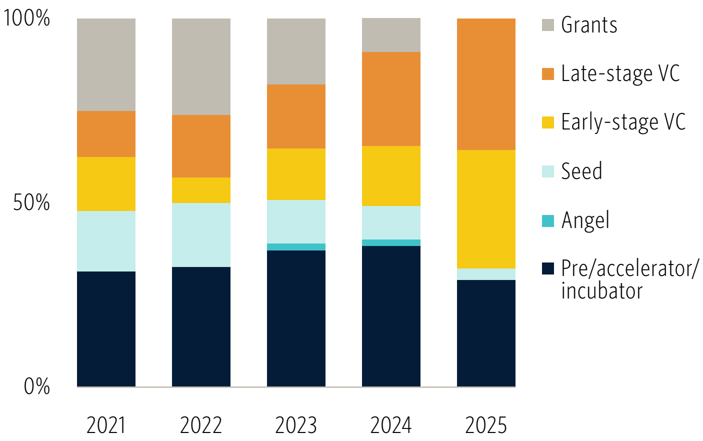


Source: PitchBook • Geography: Global • As of September 15, 2025

Median autonomous maritime systems post-money valuation ($M) by year

Source: PitchBook • Geography: Global • As of September 15, 2025

Share of autonomous maritime systems investment by stage



Source: PitchBook • Geography: Global • As of September 15, 2025

Top autonomous maritime systems companies by total raised

Company	Total raised ($M)	Last financing size ($M)	Last financing date	Last financing deal type	HQ location	Year founded
Saronic Technologies	$845.0	$600.0	February 18, 2025	Late-stage VC	Austin, US	2022
Saildrone	$246.2	$60.0	May 13, 2025	Late-stage VC	Alameda, US	2012
XOCEAN	$187.5	N/A	N/A	Accelerator/incubator	Rathcor, Ireland	2017
Liquid Robotics	$82.8	$300.0	December 8, 2016	M&A	Herndon, US	2003
Clearpath Robotics	$82.0	$608.5	October 2, 2023	M&A	Kitchener, Canada	2009
Argeo	$79.8	N/A	July 24, 2025	Bankruptcy: Admin/reorg	Hvalstad, Norway	2014
Blue Water Autonomy	$64.0	$50.0	Auguest 26, 2025	Early-stage VC	Boston, US	2024
Ocean Aero	$60.1	$25.0	December 13, 2024	Late-stage VC	Gulfport, US	2012
Bedrock	$58.5	$25.0	April 7, 2025	Late-stage VC	New York, US	2019
Sea Machines	$51.5	$14.1	February 6, 2024	Late-stage VC	Boston, US	2015

Source: PitchBook • Geography: Global • As of September 15, 2025

Top autonomous maritime systems companies by Exit Predictor Opportunity Score

Company	Opportunity score	Success probability	M&A probability	IPO probability	Total raised ($M)	HQ location	Year founded
Bedrock	97	93%	90%	3%	$58.5	New York, US	2019
Blue Water Autonomy	96	90%	88%	2%	$64.0	Boston, US	2024
CargoKite	93	86%	85%	1%	N/A	Munich, Germany	2022
Seasats	93	85%	83%	2%	$20.0	San Diego, US	2020
Scoot Science	92	84%	83%	1%	$6.3	Santa Cruz, US	2017
IADYS	86	77%	75%	2%	$14.2	Roquefort-la-Bédoule, France	2016
Mocean Energy	84	76%	75%	1%	$6.0	Edinburgh, UK	2013
Maritime Robotics	81	71%	67%	4%	$12.0	Trondheim, Norway	2002
Vatn Systems	81	72%	71%	1%	$17.5	Portsmouth, RI	2023
Arksen	79	70%	67%	3%	$19.2	Haywards Heath, UK	2017
Seadronix	79	80%	31%	49%	$16.2	Ulsan, South Korea	2015

Source: PitchBook • Geography: Global • As of September 15, 2025
Note: Probability data is based on PitchBook VC Exit Predictor methodology.

Select autonomous maritime systems contracts

Year	Customer	Company/program	Value	Purpose
2025	DHS/US Coast Guard	Saildrone - BPA for autonomous USVs	$37M (blanket purchase agreement cap)	Blanket purchase agreement to supply Saildrone's unmanned surface vehicles for maritime domain awareness and search-and-rescue support for the US Coast Guard and Department of Homeland Security.
2025	US Navy (NAVSEA)	Saronic - sUSV Next Production OTA	>$392M (OTA; first order ~$197M)	Production Other Transaction Agreement for multiple batches of autonomous small unmanned surface vessels (sUSV Next) to equip the US Navy through 2031.
2025	US Marine Corps (USMC)	Greensea IQ (Bayonet 250 AUGV) - USMC Task Order	$9M (task order under a larger IDIQ)	Firm-fixed-price task order to procure nine Bayonet 250 amphibious unmanned ground vehicles and refurbish six existing units for the Littoral Explosive Ordnance Neutralization program.
2025	Australian Department of Defence/Royal Australian Navy	Anduril - Ghost Shark XL-AUV Contract	AUD 1.7B (~USD 1.13B)	Five-year contract to deliver, maintain and develop a fleet of extra-large autonomous undersea vehicles (Ghost Shark) to provide long-range intelligence, surveillance, reconnaissance and strike capability for Australia.
2024	US Navy (NAVSEA)	Saronic - Maritime Expeditionary Systems OTA	$25M	Other Transaction Agreement to develop maritime expeditionary systems and small uncrewed surface vessels; includes participation in the US Navy's 2024 Integrated Battle Problem exercise.
2024	US Navy/DIU	Saronic - Prototype OTA	$26M	Prototype Other Transaction Agreement through the Defense Innovation Unit for autonomous surface vessel prototypes.
2024	US Special Operations Command (SOCOM)	Saronic - SOCOM OTA	$8M	Other Transaction Agreement to provide small uncrewed surface vessels for special operations; concluded July 2024.
2024	Department of Defense (ONR)	ThayerMahan - Autonomous Mobile Maritime Systems for Tactical Surveillance	$19.3M	Contract from the Office of Naval Research to develop long-endurance autonomous maritime sensing technology for tactical surveillance for the US Navy and Marine Corps.
2024	DARPA	Northrop Grumman Manta Ray XLUUV	Undisclosed	Long-endurance autonomous undersea vehicle trials

Source: PitchBook • Geography: Global • As of September 15, 2025

Select autonomous maritime systems partnerships

Year	Companies	Type	Focus
2024	Vatn Systems + Lockheed Martin Ventures, RTX Ventures, In-Q-Tel	Strategic investment	Swarming AUVs and underwater communications.
2025	Kraken Technology Group + NVL	Strategic development agreement	Scale production of USVs for surveillance, infrastructure protection, and manned-unmanned teaming.
2025	Saildrone + EIFO (Denmark)	Growth investment	European ISR and offshore security services.
2025	Bedrock Ocean + NOAA	Partnership	Seabed 2030 mapping collaboration.
2025	HavocAI + Lockheed Martin	Strategic collaboration	Integrate advanced sensors and weapons systems onto HavocAI's medium unmanned surface vessels to create an integrated weapon system and accelerate the scaling of medium USVs.
2025	Saronic + Vigor Marine Group	Industrial partnership	Joint efforts to advance autonomous maritime capabilities by combining Saronic's autonomous USV technology with Vigor's shipbuilding infrastructure for US government and commercial customers.
2025	Saildrone + Palantir Technologies	Technology partnership	Scale autonomous maritime systems and deliver maritime AI solutions by combining Saildrone's large USV fleet and data with Palantir's AI-driven data integration and manufacturing tools.
2025	Greensea IQ + Ocean Power Technologies	Strategic collaboration	Integrate the EverClean hull-grooming robot with OPT's WAM-V unmanned surface vessel, creating a fully autonomous launch-and-recovery system for environmentally sustainable hull maintenance.
2025	Greensea IQ + Executive Marine Management (EMM)	Commercial partnership	Deliver EverClean hull-grooming services in the Bahamas to improve fuel efficiency and environmental stewardship for cruise and cargo vessels.
2025	Shield AI + Huntington Ingalls Industries (HII)	Strategic partnership	Integrate Shield AI's Hivemind mission-autonomy software with HII's Odyssey mission management suite to enable modular, cross-domain mission autonomy across air, land, surface, and undersea vehicles, including REMUS UUVs.
2025	Quaze Technologies + Vatn Systems	Strategic development agreement	Integrate Quaze's wireless power transfer receivers into Vatn Systems' Skelmir S-6 autonomous underwater vehicles to enable fully autonomous remote charging at wide-surface wireless power docking stations, extending mission endurance.

Source: PitchBook • Geography: Global • As of September 15, 2025

Top autonomous maritime systems companies by active patents

Company	Active patent documents	Total raised ($M)	HQ location	Year founded
Liquid Robotics	140	82.8	Herndon, US	2003
Pliant Energy Systems	32	N/A	New York, US	2007
Autonomous Robotics	30	N/A	Warminster, UK	2002
Seadronix	23	16.2	Ulsan, South Korea	2015
Sagar Defence Engineering	18	6.5	Pune, India	2015
Saildrone	18	246.2	Alameda, US	2012
Marine Advanced Robotics	15	N/A	Richmond, US	2004
Oceanic Constellations	15	11.6	Kamakura, Japan	2023
MRV Systems	12	N/A	San Diego, US	2010
Cellula Robotics	11	N/A	Burnaby, Canada	2001

Source: PitchBook • Geography: Global • As of September 15, 2025

Top autonomous maritime systems investors

Investor	Investment count	Primary investor type	HQ location
Innovate UK	11	Government	Swindon, UK
US National Science Foundation	8	Government	Alexandria, US
European Commission	7	Government	Brussels, Belgium
PortXL World Port Innovator	7	Accelerator/incubator	Rotterdam, Netherlands
US Department of Energy	7	Government	Washington, US
Creative Destruction Lab	6	Accelerator/incubator	Toronto, Canada
Gulf Blue Navigator	6	Accelerator/incubator	Gulfport, US
National Oceanic and Atmospheric Administration	6	Government	Washington, US
Techstars	6	Accelerator/incubator	New York, US

Source: PitchBook • Geography: Global • As of September 15, 2025

Recommended reading

- "Autonomous Shipping," IMO, n.d., accessed September 16, 2025.
- "Coast Guard: Autonomous Ships and Efforts to Regulate Them," GAO, August 8, 2024.
- "Uncrewed Maritime Systems: A Primer," UNIDIR, Theò Bajon and Sarah Grand-Clément, n.d., accessed September 16, 2025.