



#### **JOINT MEDIA RELEASE**

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#### Smart Port Challenge 2025 draws record of 288 proposals from 35 countries

The Maritime and Port Authority of Singapore (MPA) and NUS Enterprise, the entrepreneurial heart of the National University of Singapore (NUS), held the annual PIER71 Great Circle 2025 today, featuring the 9<sup>th</sup> Smart Port Challenge (SPC) Grand Finals and a Maritime Technology (MarineTech) Innovation Showcase.

2. MPA Chief Executive, Mr Ang Wee Keong, officiated at the event, which brought together over 300 participants from start-ups, venture capital firms, research institutions, and the maritime community.

### **Expanding Reach and Supporting Innovation**

- 3. Following the Call for Proposals in June 2025 to invite startups to develop innovative solutions for the maritime industry, roadshows were conducted across 13 cities<sup>1</sup> including for the first time, in Boston and Los Angeles in the United States, as well as cities in China, Germany, India, the Netherlands and the United Kingdom. A record 288 submissions from 35 countries<sup>2</sup> were received in response to the 15 challenge statements addressing key issues and opportunities in the global maritime industry. These covered digitalisation, smart ports, smart shipping, and maritime green technologies (See **Annex A**).
- 4. From these submissions, 19 start-ups were selected for the 10-week SPC Accelerate programme, receiving mentorship, hands-on workshops, and market validation support. Together, these start-ups have secured over 30 Letters of Intent with local maritime companies to explore proof-of-concept or pilot trials.

### **Strengthening the MINT Ecosystem**

5. Selected SPC participants can qualify for grants of up to S\$100,000 for proof-of-concept or pilot trials, and up to S\$250,000 for product development under MPA's Maritime Innovation and Technology (MINT) Fund.

<sup>&</sup>lt;sup>1</sup> PIER71 SPC in-person roadshows across 13 cities in – China (Guangzhou, Shenzhen), Europe (Hamburg, London, Rotterdam), South Korea (Busan, Seoul), India (Chennai, Mumbai), Singapore, and the United States (Boston, Los Angeles, San Francisco). This was the first time roadshows were held in Boston and Los Angeles, China, Germany, India, the Netherlands and the United Kingdom.

<sup>&</sup>lt;sup>2</sup> Most proposals came from Singapore, India, the United States, China, the United Kingdom, and South Korea.

6. Since the inception of SPC in 2017, the MINT Fund has supported 68 start-ups, with over 30 innovative technologies already deployed in the maritime sector following successful trials (see **Annex B**). The eligibility criteria for the MINT START-UP Grant have also been broadened to include start-ups funded by partner Venture Capitals (VCs) and Corporate Venture Capitals (CVCs), enabling a wider pool of innovative companies in Singapore's ecosystem to benefit from the support.

## **Recognising Top Innovators**

- 7. At the SPC 2025 Grand Finals, **Cyntegra** emerged as the Top Start-up winner, sponsored by the American Bureau of Shipping (ABS). **Onecare Group** emerged as the Top Scale-up winner, sponsored by Reefknot Capital. The winners were awarded S\$15,000 each.
- 8. Four thematic prizes of S\$10,000 each were presented to: **OneCare Group** for Digitalisation Prize, sponsored by RINA; **Beecharge Innovation Group** for Maritime Green Technologies Prize, sponsored by OCBC and Smart Port Prize, sponsored by PSA Singapore and PSA Ventures; and **Fathom Science** for Smart Shipping Prize, sponsored by ZEBOX. **Fathom Science** was also acknowledged by the Judges with a Special Mention (see **Annex C and D**).
- 9. The judging panel comprised Associate Professor Chai Kah Hin, Dean, School of Continuing and Lifelong Education, NUS; Mr Chin Yi Zhuan, Deputy Chief Executive (Industry & Corporate), MPA; Dr Gu Hai, Vice President of Technology, American Bureau of Shipping; and Mr Marc Dragon, Managing Partner, Reefknot Capital.

#### **PIER71's Continued Impact**

- 10. Since its establishment in 2018, PIER71 has nurtured close to 170 start-ups, which have collectively raised over S\$130 million in venture capital funding. Many have gone on to deploy their technologies commercially or scale their operations (see **Annex E**).
- 11. This year, PIER71 also launched a MarineTech Directory to connect maritime companies and investors with promising start-ups (<a href="https://pier71.sg/startups">https://pier71.sg/startups</a>), underscoring its continued role as an important catalyst for maritime innovation.

## Strength in Partnership

- 12. Mr Ang said, "Congratulations to this year's winners and finalists. The growing participation in the Smart Port Challenge shows that Singapore remains a key global maritime innovation hub. The PIER71 ecosystem will continue to bring together maritime companies, startups, investors, and partners from adjacent sectors to collaborate and learn from one another. Together, we can build a maritime industry that is innovative, resilient, and ready for the future."
- 13. Dr Tan Sian Wee, NUS Senior Vice President (Innovation and Enterprise), said, "With over 200 international shipping groups and a growing MarineTech start-up community, Singapore is steadily emerging as a vibrant hub for maritime innovation. The record submissions for Smart Port Challenge 2025 and our start-ups raising nearly S\$40 million this

year – up from S\$29.4 million in 2024 – highlight the sector's steady progress and strengthening foundations. These achievements underscore PIER71's commitment to nurturing and connecting start-ups with partners and markets, turning bold ideas into scalable companies."

- 14. Dr Gu Hai, ABS Vice President of Technology (Pacific), said, "The Smart Port Challenge is a powerful catalyst, connecting innovators with real operational challenges across the maritime ecosystem. ABS is committed to collaborating with startups and stakeholders to transform promising concepts into class-aligned solutions that support safety and sustainability across the industry. Congratulations to the finalists—your work is helping the industry move forward with greater confidence and purpose."
- 15. Mr Marc Dragon, Managing Partner of Reefknot Capital, said, "We are thrilled to sponsor the Top Scale-up Prize for this year's Smart Port Challenge. This collaboration with MPA and PIER71 underscores Reefknot's commitment to driving Supply Chain and Maritime innovation and transformation through Singapore, globally. We believe that Singapore is a great location to be a catalyst for developing and nurturing impactful and sustainable start-ups in the Maritime and Logistics space. We will continue with our Venture Investments in this domain, as well as extend our innovation advisory arm in support of the industry."

- End of release -

#### **About PIER71**

Founded by the Maritime and Port Authority of Singapore (MPA) and the National University of Singapore (NUS), through its entrepreneurial arm NUS Enterprise, PIER71 (Port Innovation Ecosystem Reimagined at BLOCK71) aims to grow Singapore's maritime innovation ecosystem. PIER71 boosts innovation in the maritime and maritime-related industries by attracting talents, creating opportunities for the exchange of knowledge and ideas, attracting investments into start-ups and accelerating ventures.

PIER71 designs and delivers programmes to uncover opportunities within the industry and supports entrepreneurs from ideation to acceleration of their ventures. PIER71 provides access to various markets, demand drivers, technology solution providers, investors and more. PIER71 also represents a budding and increasingly vibrant ecosystem of stakeholders who are keen to digitalise and create the next wave of maritime innovation.

For more information, please visit <a href="https://pier71.sg">https://pier71.sg</a>.

## **About Maritime and Port Authority of Singapore (MPA)**

MPA was established in 1996 with the mission to develop Singapore as a global hub port and international maritime centre, and to advance and safeguard Singapore's strategic maritime interests. MPA takes on multiple roles as Singapore's maritime and port regulator and planner, international maritime centre champion, national maritime representative, and champion of maritime digitalisation and decarbonisation efforts. MPA partners industry, research community and other agencies to enhance safety, security and environmental protection, facilitate maritime and port operations and growth, expand multi-domain capabilities, and support the cluster of maritime services and manpower development.

For more information, please visit <a href="www.mpa.gov.sg">www.mpa.gov.sg</a>.

#### **About National University of Singapore (NUS)**

The National University of Singapore (NUS) is Singapore's flagship university, which offers a global approach to education, research and entrepreneurship, with a focus on Asian perspectives and expertise. We have 16 colleges, faculties and schools across three campuses in Singapore, with more than 40,000 students from 100 countries enriching our vibrant and diverse campus community. We have also established more than 20 NUS Overseas Colleges entrepreneurial hubs around the world.

Our multidisciplinary and real-world approach to education, research and entrepreneurship enables us to work closely with industry, governments and academia to address crucial and complex issues relevant to Asia and the world. Researchers in our faculties, research centres of excellence, corporate labs and more than 30 university-level research institutes focus on themes that include energy; environmental and urban sustainability; treatment and prevention of diseases; active ageing; advanced materials; risk management and resilience of financial systems; Asian studies; and Smart Nation capabilities such as artificial intelligence, data science, operations research and cybersecurity.

For more information on NUS, please visit www.nus.edu.sg.

## **About NUS Enterprise**

Guided by its mission to make the National University of Singapore (NUS) a magnet for talent and an engine for global innovation, NUS Enterprise, the entrepreneurial heart of the University, seeds ideas, sparks innovations, and scales ventures into global companies. Since 2001, NUS Enterprise has nurtured nearly 4,300 students and supported over 3,000 start-ups, including 10 unicorns, enriching innovation and start-up ecosystems globally.

Through experiential learning, ecosystem building, technology translation and commercialisation, and strategic global partnerships, NUS Enterprise equips the next generation of changemakers to address humanity's most pressing challenges. Its ambition: to improve the lives of 1 billion people within the next decade.

For more information, please visit https://enterprise.nus.edu.sg.

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# Annex A: Smart Port Challenge 2025 Innovation Opportunities

1	alisation
	Derisking onboard inspections
1	How might we minimise personnel risk during onboard inspections in hazardous,
	confined, or structurally unsafe environments?
	Confined, or structurally unsafe environments?
2	Managing cybersecurity risks and incidences
_	How might we enable shipping companies to meet cybersecurity regulations and
	standards, secure operational systems, and empower crew to better manage
	cybersecurity risks and incidents?
	Cyberacounty risks and including:
3	Cybersecurity anomalies
	How might we develop lightweight, scalable, and network-agnostic solutions to
	remotely monitor and detect cybersecurity anomalies, vulnerabilities, events or
	incidents?
	moderne.
Mariti	ime Green Technologies
4	Recycling ship waste
	How might we develop an effective system for collecting, cleaning, and recycling
	ship waste or garbage (e.g. used cotton gloves, rugs, and mooring ropes)?
Smar	t Shipping
5	Enabling connectivity for maritime vessels
	How might we enable pervasive, high-bandwidth connectivity for maritime vessels,
	particularly in steel-enclosed zones (e.g. engine, cargo control crew rooms) to
	enable smart ship operations and digital services?
6	Digital tools to enhance energy efficiency
	How might we leverage digital tools to achieve near real-time insights, predictive
	optimisation, regulatory compliance, and empower ship operators to enhance
	energy efficiency, without requiring major operational disruptions or high capital
	investment?
7	Crew training solutions to adopt energy-efficient practices
	How might we design flexible, scalable and engaging crew training solutions that
	empower seafarers with varying skills and languages to adopt energy-efficient
1	
	practices and be confident with digital tools on ships?
8	
8	practices and be confident with digital tools on ships?
8	practices and be confident with digital tools on ships?  Safer pilot or crew transfer solution
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9	Safer pilot or crew transfer solution How might we create a safer pilot/crew transfer solution that reduces reliance on ladders and minimises climbing-related risks?  Situational awareness on and around ships How might we improve situational awareness on and around ships, to enhance safety and security of ship voyage and operations in port?  Reducing human error at sea How might we reduce human error at sea by unlocking real-time insights into crew
9	Safer pilot or crew transfer solution How might we create a safer pilot/crew transfer solution that reduces reliance on ladders and minimises climbing-related risks?  Situational awareness on and around ships How might we improve situational awareness on and around ships, to enhance safety and security of ship voyage and operations in port?  Reducing human error at sea
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Next	Generation Ports
11	Hull cleaning How might we develop operationally safe and environmentally friendly hull cleaning and biofouling management solutions for vessels in the Port of Singapore, minimising operational downtime, reducing costs, and addressing the challenges of waste collection, disposal and recycling?
12	Cargo hold cleaning or discharge How might we make cargo hold cleaning or discharge on bulk carriers safer and more efficient?
13	Managing garbage from vessels  How might port service providers collect and manage garbage from vessels efficiently and cost effectively while overcoming the current challenges of high manpower, expense, and low efficiency?
14	Detecting and mitigating chemical or oil spills  How might we help the first responders develop more efficient and lightweight oil and chemical spill detection solutions that can be easily deployed, operate reliably in Singapore's tropical maritime port water conditions, and provide timely actionable information for incident response teams?
15	Robotic stevedoring operations How might we enable faster validation and testing of new automation/robotic solutions for stevedoring operations while reducing the need for extensive physical prototyping and field testing?

Annex B: New Recipients of Maritime Innovation and Technology (MINT) Grant from July 2025

Startup	Industry Partner	Project Title	Project Description
Clear Robotics Limited Sidhant Gupta CEO sid@clearbot.org	Tian San Shipping	Autonomous Waterway Cleaning and Surveying for Singapore	Develop and trial an autonomous electric vessel system for Singapore's inland and nearshore waters integrating marine debris collection and hydrographic surveying into a single, unmanned, zero-emissions platform.
Sheco Singapore Pte Ltd Choji Choi Head of Global Sales choji.choi@sheco.co	Marinteknik	Plan to develop a platformed multi-purpose unmanned drone (USV) and customised recovery module to automate pollution response at the Port of Singapore	Development of autonomous operation of platform-type multi-purpose water drone (USV) for environmental cleanup, advancement of recovery modules that can respond to marine pollutants

Annex C: List of Winners for Smart Port Challenge 2025

No.	Prizes	Start-up	Country	Description	Category
	Prizes (S\$15,00			<b> </b>	
1	Top Start-up Prize Sponsored by ABS	Cyntegra	United Kingdom	Cyntegra's patented Cydecar® enables ports, logistics, and shipping firms to restore critical systems within minutes after cyber attacks, avoiding costly disruptions. It requires no IT support, hardware replacement, or system integration, and can be deployed instantly, ensuring rapid recovery and operational resilience.	Digitalisation
2	Top Scale-up Prize Sponsored by Reefknot Capital	OneCare Group	Cyprus	OneCare Group provides integrated health, wellbeing, and eLearning solutions for the maritime industry, addressing crew fatigue, mental health, skills gaps, and high turnover. Its 24/7 telemedical support, tailored wellness programs, and digital tools, they enhance crew resilience, safety, and retention across shipping, offshore, cruise, and yacht sectors.	Smart Shipping
Corp	orate Sponsore	d Thematic Priz	zes (S\$10,00	0 each)	
3	Digitalisation Prize Sponsored by RINA	OneCare Group	Cyprus	As above	Smart Shipping
4	Maritime Green Technologies Prize Sponsored by OCBC	Beecharge Innovation Group	Singapore	Beecharge offers off- grid, solar-powered EV charging solutions with predictive dispatch, enabling ports and maritime operators to decarbonize quickly and flexibly. Their mobile units eliminate	Maritime Green Technologies

				the need for fixed infrastructure, ensuring continuous, efficient energy delivery for fleets and harbour craft—trusted by industry leaders in maritime sustainability.	
5	Smart Port Prize Sponsored by PSA Singapore and PSA Ventures	Beecharge Innovation Group	Singapore	As above.	Maritime Green Technologies
6	Smart Shipping Prize Sponsored by ZEBOX And Special Mention	Fathom Science	United States	Fathom Science delivers cutting-edge ocean intelligence by combining AI with physics-based ocean, weather, and wave modelling. Its platform creates a real-time digital twin of the ocean, providing hyperlocal, high-fidelity forecasts that help the maritime industry's decision-making in safety, route planning, emissions reduction, offshore operations, port logistics, and marine conservation.	Smart Shipping
	lists/Semi Finalists are the top 8 star		4h- CDC 2025		
1	Semi Finalist	Cydome Security	Israel	Cydome, a class-certified maritime cybersecurity provider, offers autonomous, multi-layered protection for vessels, ports, and offshore facilities. Their Aldriven platform ensures compliance with global regulations and detects threats before they occur, keeping critical assets secure and resilient without on-site cyber personnel.	Digitalisation

2	Finalist	Cyntegra	United Kingdom	Cyntegra's patented Cydecar® enables ports, logistics, and shipping firms to restore critical systems within minutes after cyber attacks, avoiding costly disruptions. It requires no IT support, hardware replacement, or system integration, and can be deployed instantly, ensuring rapid recovery and operational resilience.	Digitalisation
3	Finalist	Beecharge Innovation Group	Singapore	Beecharge offers off- grid, solar-powered EV charging solutions with predictive dispatch, enabling ports and maritime operators to decarbonize quickly and flexibly. Their mobile units eliminate the need for fixed infrastructure, ensuring continuous, efficient energy delivery for fleets and harbour craft—trusted by industry leaders in maritime sustainability.	Maritime Green Technologies
4	Semi-Finalist	Bennu Climate	United States	Bennu's methane- destroying technology captures methane emissions from LNG exhaust, natural gas infrastructure, and port operations, helping combat climate change by preventing a major greenhouse gas from entering the atmosphere. Their service-based model offers easy deployment, maintenance, and regulatory compliance	Maritime Green Technologies

				without upfront capital costs.	
5	Semi-Finalist	Entropy Lab	Singapore	Entropy Lab has pioneered passive cooling with PasteCool® cooling paint, a nanoengineered coating that deflects solar radiation and mitigates urban heat. The paint significantly lowers surface temperatures and decreases energy consumption without relying on electricity or carbon-intensive methods.	Maritime Green Technologies
6	Semi-Finalist	CRABI Robotics	United States	CRABI Robotics has developed an autonomous marine robot that reduces cargo vessel fuel consumption by 9-17% via underwater hull cleaning, while underway. This can save up to \$\$2.6 million annually per vessel and improves the Carbon Intensity Indicator (CII), eliminates cleaning downtime, increases speed, and prolongs coating lifetimes.	Next Generation Ports
7	Semi-Finalist	DataFlare	South Korea	DataFlare is a maritime AI startup addressing the pressing challenge of air pollution in ports. Its AI Port Flare Agent provides real-time, non-intrusive monitoring of ship emissions without onboard hardware, using advanced sensors, AI vision, embedded analytics, and a patented	Next Generation Ports

				reverse-tracing algorithm that analyses wind, Automatic Identification System or National Marine Electronics Association data, and gas dispersion.	
8	Finalist	Fleet Robotics	United States	Fleet Robotics provides an autonomous solution for continuous hull grooming and optimisation. Its compact robots enable high-frequency cleaning to prevent fouling buildup, reduce fuel consumption and downtime, and help vessels meet environmental standards. With advanced monitoring and data-driven insights, crews maintain peak performance without manual intervention while underway.	Next Generation Ports
9	Semi-Finalist	Phantom Edge	Singapore	Phantom Edge offers fully unmanned maritime inspections through drone technology and proprietary software, enabling remote, safer, and more efficient asset checks. Its platform provides real-time data and automated reports, enhancing maritime safety and operational decision-making.	Next Generation Ports
10	Finalist	TASGLOBAL	South Korea	TASGLOBAL's Mmech is an in-water remotely operated vehicle that cleans and inspects ship hulls	Next Generation Ports

				without dry docking or diver risks, reducing biofouling and boosting fuel efficiency by 40 per cent. Designed for proactive and reactive maintenance, it supports vessel efficiency, decarbonisation targets, and regulatory compliance.	
11	Semi-Finalist	Epic Blue	Belgium	Epic Blue's Al- powered Hyper Location platform provides reliable 3D positioning via smartphones, enhancing safety and coordination for first responders in GPS- challenged indoor, urban, and natural environments. It ensures real-time location awareness without extra hardware, improving mission safety and response times.	Smart Shipping
12	Finalist	Fathom Science	United States	Fathom Science delivers cutting-edge ocean intelligence by combining AI with physics-based ocean, weather, and wave modelling. Its platform creates a real-time digital twin of the ocean, providing hyperlocal, high-fidelity forecasts that help the maritime industry's decision-making in safety, route planning, emissions reduction, offshore operations, port logistics, and marine conservation.	Smart Shipping

13	Finalist	GILLS	Singapore	GILLS' patented air lubrication system reduces fuel consumption and CO2 emissions by 10%, certified by leading classification societies. Using micro bubbles generated via Kelvin Helmholtz Instability, it can be installed on large vessels and smaller crafts, with options for compressor-free operation on smaller boats. GILLS is part of the Singapore National Biofilm Consortium	Smart Shipping
14	Semi-Finalist	NASH Maritime	United Kingdom	NASH Maritime provides Al-powered software and consulting to tackle complex maritime challenges, enhancing navigation, safety, and operational decision-making. Their solutions enable faster, more accurate planning for ports, governments, and engineers, driving efficiency and transparency in maritime operations through strategic collaborations.	Smart Shipping
15	Finalist	OneCare Group	Cyprus	OneCare Group provides integrated health, wellbeing, and eLearning solutions for the maritime industry, addressing crew fatigue, mental health, skills gaps, and high turnover. Its 24/7 telemedical support, tailored wellness programs, and digital tools, they enhance crew resilience, safety,	Smart Shipping

				and retention across shipping, offshore, cruise, and yacht sectors.	
16	Semi-Finalist	Pharos Marine	South Korea	Pharos Marine develops zero-emission hydrogen-electric propulsion systems designed for small to mid-sized vessels. Its technology integrates a high-efficiency rim-driven electric thruster, a marine-optimised hydrogen fuel cell, and smart Balance of Plant, overcoming conventional engine limitations in noise, vibration, maintenance, and emissions while offering greater cruising range and energy efficiency.	Smart Shipping
17	Semi-Finalist	Sailor's Cart	Singapore	Sailor's Cart is an online platform improving life at sea for seafarers. It delivers daily essentials and personal items directly onboard, addressing restricted shore access, inflated prices, and grey market risks. Transparent pricing and reliable service ensure crew members receive what they need fairly and conveniently.	Smart Shipping
18	Semi-Finalist	Speedbird Aero	Brazil	Speedbird offers advanced drone- based logistics solutions, specialising in autonomous delivery using unmanned aircraft systems. Its	Smart Shipping

				technology enables rapid, safe, and efficient aerial delivery of medical supplies, ecommerce goods, and essential items, enhancing efficiency and access to timesensitive resources.	
19	Finalist	Zhejiang Chengshi Robot	China	Chengshi Robot is a high-tech enterprise specialising in emergency rescue robots and intelligent solutions, aiming to reduce rescue risks and costs. Its surface and ground robots, and rescue systems, are tested and verified by authoritative bodies, deployed in real-world operations across China, and trusted by the National Water Rescue Brigade, Haixun 03, and Maritime 01.	Smart Shipping

## Annex D: Photographs at Great Circle 2025

## i) Top Start-up and Top Scale-up Prize Winners



(Left to Right):

Mr Chin Yi Zhuan, Deputy Chief Executive (Industry and Corporate), MPA (Judge)

Capt. Sundeep Sequeira, Head of Business Development, OneCare Group Mr. Marinos Kokkinis, Managing Director, OneCare Group (Top Start-up Prize Winner) Assoc. Prof Chai Kah Hin, Dean, School of Continuing and Lifelong Education, NUS (Chief Judge)

Mr Ang Wee Keong, Chief Executive, MPA (Guest of Honour)

Mr Giles Watkins, CEO, Cyntegra (Top Scale-up Prize Winner)

Mr Marc Dragon, Founding Managing Partner, Reefknot Capital, (Judge and Prize Sponsor) Dr Gu Hai, Vice President of Technology, American Bureau of Shipping, (Judge and Prize Sponsor)

# ii) Group Photo with Smart Port Challenge Cohort 2025



#### Annex E: Success Stories of Smart Port Challenge Alumni

Since participating in Smart Port Challenge 2024, six of the 15 international start-ups – Cetasol (Sweden), Clear Robotics (Hong Kong), Mapsea Corporation (South Korea), Sheco (South Korea), Willog (South Korea), and Mely.Al (Canada) – have established offices in Singapore.

In addition, PIER71 start-ups have continued to deploy their technologies in the maritime industry, including:

### 1. Clear Robotics

Clear Robotics, winner of the 2024 Smart Port Challenge, is developing unmanned electric boats for sustainable marine services such as garbage removal, water data collection, and patrolling across Asia. Featuring self-docking and solar charging, their vessels can be retrofitted on existing ships. Currently raising S\$2.6 million (US\$2.0 million) in seed funding, they are testing water cleaning and waste removal at Singapore's Woodlands Jetty under the MPA MINT Fund. Their new factory in Bangalore is now operational to ramp up production.

#### 2. Open Ocean Robotics

Open Ocean Robotics, 1<sup>st</sup> runner up of the 2024 Smart Port Challenge, offers Al-driven USVs (unmanned surface vehicles) for real-time maritime monitoring, detecting small crafts and unusual activities to combat piracy and enhance safety. Their long-endurance autonomous vehicles, integrated with the XplorerView platform, provide night and day alerts, supporting maritime security and spill response. The system was showcased in Singapore's recent multi-agency chemical spill exercise organised by MPA, demonstrating its ability to monitor air quality and assist in emergency response.

### 3. Groundup.ai

Groundup.ai, 2020 Smart Port Challenge alumni, delivers Al-powered Cognitive Maintenance that equips organisations with real-time intelligence to keep mission-critical equipment running at peak performance with zero downtime. They have just completed a successful USD\$4.25m Series A fundraising round. Going beyond traditional predictive maintenance, their Al solution has delivered proven results for B2G & B2B clients in the maritime, manufacturing, and critical infrastructure sectors, helping them cut downtime, slash maintenance costs, extend asset lifespan, and support key sustainability goals.