

MEDIA RELEASE

Singapore, 25 April 2023 | **For Immediate Release**

MarineTech Conference and Sea Asia Exhibition at Singapore Maritime Week 2023

The Maritime and Port Authority of Singapore (MPA) continues to transform the future of the maritime sector through collaboration with research institutes and industry on digitalisation and cybersecurity to strengthen global maritime supply chains.

Global Thought Leadership at MarineTech Conference

2. The MarineTech Conference was opened today by Mr Chee Hong Tat, Senior Minister of State for Finance and Transport. Held from 25 to 26 April 2023 at the Marina Bay Sands Expo and Convention Centre, the conference brings together more than 50 global industry speakers from 16 countries to discuss challenges and innovation opportunities, share insights on emerging technologies, and identify ways to accelerate maritime transformation.

3. Topics on smart ports and ships, green and digital shipping corridors, innovation and start-ups, decarbonisation and green technologies, maritime cybersecurity, and technologies to empower seafarers, was discussed across 14 panel and speaker sessions. Key overseas speakers include Francis Zachariae, Secretary-General, International Association of Marine Aids to Navigation and Lighthouse Authorities (IALA), as well as representatives of major shipping companies, innovation and venture capital players and industry associations such as International Association of Ports and Harbours and the Digital Container Shipping Association.

Accelerating Digitalisation through Collaboration

4. MPA and PSA Singapore renewed the Memorandum of Understanding (MoU) on Port Technology Research and Development Programme. As part of the MoU, MPA and PSA will each commit \$12 million to support transformative R&D projects.

5. The conference also hosted the signing of other MoUs and agreements¹ between industry partners including:

- ZEBOX co-innovation agreement with Bureau Veritas Marine & Offshore, PSA unboXed and Synergy Marine Group to develop game-changing solutions with startups for operational efficiency, assets optimisation and decarbonisation, workflow automation, and future of work;

¹ Annex A: List of MOUs to be signed by industry partners during MarineTech Conference

- Master Agreement Framework for Maritime AI Research Programme led by A*STAR's Institute of High Performance Computing to drive industry transformation and adoption of maritime AI solutions; and
- MoU by Coastal Sustainability Alliance and its new partners to support decarbonisation of Singapore's domestic harbour craft sector by developing an electric vessel ecosystem, including charging stations, marine logistics and services, as well as workforce upgrading.

Showcasing a Vibrant MarineTech Innovation and Sustainability Ecosystem at Sea Asia 2023

6. Sea Asia 2023 was opened today by Mr Baey Yam Keng, Senior Parliamentary Secretary, Ministry of Sustainability and Environment & Ministry of Transport. Organised in conjunction with Singapore Maritime Week, Sea Asia is a flagship tradeshow held biennially to provide a platform for industry professionals to connect, collaborate, and explore the latest trends shaping the future of the maritime industry.

7. From 25-27 April 2023, the 9th edition of Sea Asia² will see over 300 exhibitors from more than 70 participating countries showcasing innovative solutions across the maritime value chain. The event will feature more than 10 national pavilions, as well as zones dedicated to specific areas such as marine fuels and lubricants, decarbonisation solutions, and marine supplies. Within the MarineTech zone, the PIER71^{TM3} pavilion featured various R&D and technology solutions developed by maritime enterprises, start-ups and technology developers under the PIER71TM programme.

8. One such exhibitor is SunGreenH2, a Singapore based cleantech start-up that had won a Special Mention in the 2022 edition of PIER71's^{TM3} Smart Port Challenge for its proposal on their hydrogen producing electrolyzers. Since then, it has secured opportunities to pilot their high-performance electrolyser on Jurong Island, which is able to produce two times more green hydrogen from purified water at 10% lower energy consumption. Beyond Singapore, the start-up will be deploying their first commercial electrolyzers with Spain's Naturgy Innovahub and has also been invited by the Hamburg Government to demonstrate their electrolyser at the German Aerospace Research Institute ZAL in May 2023.

9. The tradeshow will also offer a unique opportunity and space for attendees to participate in knowledge-sharing sessions and dialogues led by industry professionals. Titled "Knowledge Sharing Theatre", there will be more than 25 presentations and product demonstrations led by exhibitors over three days.

² More information on Sea Asia 2023 is available online at sea-asia.com

³ Founded by the Maritime and Port Authority of Singapore (MPA) and the National University of Singapore (NUS), through its entrepreneurial arm NUS Enterprise, PIER71TM designs and delivers programmes to uncover opportunities within the industry and supports entrepreneurs from ideation to acceleration of their ventures. For more information, please visit <https://pier71.sg>



Port Authorities Chief Information Officers Cybersecurity Network (PACC-Net)

10. In conjunction with the Singapore Maritime Week 2023, an inaugural table-top exercise (TTX) for the Port Authorities Chief Information Officers Cybersecurity Network (PACC-Net) will be held on 27 April 2023 to test and exercise the information sharing protocols.

11. The TTX will involve Chief Information Officers and Chief Information Security Officers from international port operators and authorities including MPA, Montreal Port Authority, National Ports Agency of Morocco, Port Klang Authority, Port of Seattle, and Tanger Med Special Agency (Port Authority). The TTX will simulate a ransomware affecting multiple ports across regions, and PACC-Net members will work out a collaborative response to share critical information early and manage the ransomware.

12. The proposal for PACC-Net was tabled by MPA at the 5th edition of the Port Authorities Roundtable in Kobe, Japan in 2019 and launched in October 2020⁴. The PACC-Net aims to enhance cybersecurity awareness within the maritime sector and facilitate early sharing of cyber information to counter potential maritime cyber security threats. These collaborations are important as the industry become more digitalised and connected as a cyber incident in one place can quickly impact the supply chain globally.

For more details on SMW 2023, visit <https://www.smw.sg/>.

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⁴ Annex B: List of countries and authorities under PACC-Net



About Maritime and Port Authority of Singapore (MPA)

MPA was established on 2 February 1996 with the mission to develop Singapore as a premier global hub port and international maritime centre, and to advance and safeguard Singapore's strategic maritime interests. MPA is the driving force behind Singapore's port and maritime development, taking on the roles of port authority, maritime and port regulator and planner, international maritime centre champion, national maritime representative and a champion of digitalisation and decarbonisation efforts at regional and international fora such as at the International Maritime Organization. MPA partners industry, research community and other agencies to enhance safety, security and environmental protection in our waters, facilitate maritime and port operations and growth, expand the cluster of maritime ancillary services, and develops maritime digitalisation and decarbonisation policies and plans, R&D and manpower development. MPA is responsible for the overall development and growth of the maritime domain and Port of Singapore. In 2022, Singapore remained one of the world's busiest transshipment hubs with a container throughput of 37.3 million 20-foot equivalent units (TEUs).

For more information, please visit <https://www.mpa.gov.sg>

About Singapore Maritime Week 2023

SMW is an annual gathering of the international maritime community to advance key industry issues and exchange ideas to bring the sector forward. Driven by MPA, in collaboration with industry stakeholders and research and educational institutions, SMW brings together key opinion leaders and industry leaders through conferences, dialogues and forums.

The range of activities and events organised by MPA, industry stakeholders and research and educational institutions, as well as the cosmopolitan profile of participants, reflect the vibrancy and diversity of Singapore as a global hub port and leading international maritime centre.

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Annex A: Memorandums of Understanding (MoUs) to be signed at MarineTech Conference @ SMW 2023 on 25th April 2023

MoU Title	MoU Partners	MoU Details and Plans
<p>5th renewal of MPA-PSA MoU on Port Technology Research and Development Programme</p>	<ol style="list-style-type: none"> 1) Maritime and Port Authority of Singapore 2) PSA Singapore 	<p>First signed in 2011, the renewal will prioritise new impactful areas for research and test-bedding of new technologies for PSA terminals in automation, robotics, digital and sustainability solutions.</p>
<p>Master Agreement Framework for Maritime AI Research Programme with Industry Partners</p>	<ol style="list-style-type: none"> 1) A*STAR's Institute of High Performance Computing 2) A*STAR's Institute for Infocomm Research (I²R) 3) American Bureau of Shipping 4) Bureau Veritas Marine & Offshore 5) ClassNK 6) METIS Cyberspace Technology (Singapore) Pte Ltd 7) Monohakobi Technology Institute Co. Ltd 8) PSA Marine (Pte) Ltd 9) ShipsFocus Services Pte Ltd 	<p>A*STAR will be formalising a Master Agreement Framework with seven industry partners to collaborate on a Maritime AI Research Programme.</p> <p>Under this programme, A*STAR's IHPC will lead the research activities and translational efforts related to AI technologies in the maritime industry, as well as collaborate with industry partners and research performers including IHLs and research entities. The programme will contribute to industry transformation and help maritime companies develop the necessary capabilities to implement AI solutions and overcome barriers to-adoption.</p>



		<p>Initial projects under the Maritime AI Research Programme include near collision detection, predictive maintenance, launch boat optimisation, and energy consumption prediction.</p>
<p>ZEBOS Co-Innovation Agreement with Industry Partners</p>	<ol style="list-style-type: none"> 1) ZEBOS 2) Bureau Veritas Marine & Offshore 3) PSA unboXed 4) Synergy Marine Group 	<p>ZEBOS Asia Pacific is a global accelerator gathering a network of entrepreneurs, industry leaders, and ecosystem experts paving new paths toward sustainability starting with the supply chain. From Singapore, ZEBOS Asia Pacific is set to accelerate decarbonisation and operational optimisation in the supply chain through innovations with startups and corporations.</p> <p>Joining CMA CGM, ZEBOS’s founding partner, PSA unboXed, Bureau Veritas Marine and Offshore, and Synergy Marine Group have become corporate partners of ZEBOS Asia Pacific to co-innovate for solutions in the region.</p> <p>ZEBOS Asia Pacific will also work with Enterprise Singapore to identify promising Singapore SMEs and start-ups, matching their solutions with curated problem statements posed by overseas and Singapore corporates to address challenges in the areas of supply chain, transport, logistics, and energy.</p>



<p>MoU Formalisation on Coastal Sustainability Alliance</p>	<p>Existing Partners:</p> <ol style="list-style-type: none"> 1) A*STAR Research Entities 2) Genplus Pte. Ltd. 3) Jurong Port Pte. Ltd. 4) PaxOcean Engineering Pte. Ltd. 5) Sea Forrest Power Solutions Pte. Ltd. 6) Technology Centre for Offshore and Marine, Singapore Ltd. 7) TES-AMM (Singapore) Pte. Ltd. <p>NEW Partners:</p> <ol style="list-style-type: none"> 8) Ampotech Pte. Ltd. 9) Columbia Shipmanagement (Singapore) Pte. Ltd. 10) Green Cop Pte. Ltd. 11) Ken Energy Pte. Ltd. 12) M1 Limited 13) Magicport Pte. Ltd. 14) RMS Marine & Offshore Service (Singapore) Pte. Ltd. 15) Singapore Institute of Technology 16) Sinwa (Singapore) Pte. Ltd. 17) ST Engineering Digital Systems Pte. Ltd. 18) SWIFT Total Logistics Pte. Ltd. 	<p>The Coastal Sustainability Alliance aims to decarbonise Singapore's coastal maritime sector by building a comprehensive ecosystem based on vessel electrification and charging infrastructure, marine logistics and services optimisation and workforce upgrading to transition towards a circular economy.</p>
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Annex B: List of countries and authorities under PACC-Net

1	Maritime and Port Authority of Singapore
2	Abu Dhabi Ports
3	Port of Antwerp
4	Port Klang Authority
5	Port and Urban Projects Bureau, Kobe
6	Port of Long Beach
7	Port of Montreal
8	Port of Morocco
9	Port of Rotterdam
10	Port of Seattle
11	Port Authority, Tanger Med Special Agency (Morocco)