



MEDIA RELEASE

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Sea Transport Industry Transformation Map 2025 to Achieve Singapore's Vision as a Global Maritime Hub for Connectivity, Innovation and Talent

Deputy Prime Minister and Coordinating Minister for Economic Policies, Mr Heng Swee Keat launched the Sea Transport Industry Transformation Map (ITM) 2025 at the Singapore Maritime Week (SMW) 2022, organised by the Maritime and Port Authority of Singapore (MPA).

Sea Transport ITM 2025

2. First launched in 2018 by MPA in partnership with the industry, unions, and other government agencies, the Sea Transport ITM builds on MPA's strategic long-term plans to develop Singapore's Next-Generation Port and strengthen our International Maritime Centre (IMC). The Sea Transport ITM laid out strategies to catalyse innovation, drive productivity improvements, and enhance the skills of the maritime workforce. These strategies were driven with the collective commitment of stakeholders such as MPA, the industry, and tripartite partners.

3. The Sea Transport ITM has been refreshed to update our strategies to address the challenges and seize new opportunities from the COVID-19 pandemic and shifts in global supply chains. The industry can look forward to increased opportunities in physical and digital connectivity for resilience, technological advancements, and the global efforts for the green transition of the maritime sector. It is also the first of the 23 sectoral ITMs to be refreshed, under the ongoing ITM 2025 efforts led by the Future Economy Council (Please refer to [ANNEX](#) for more information about the ITM 2025).

4. ***A key aim of the ITM is to grow the sector's value-add by \$2 billion, or an average rate of 2-3% annually, between 2020 and 2025.***

Maritime Singapore – Vital Enabler for Trade and Economic Activities

5. The Sea Transport sector is core to the larger Singapore maritime cluster, with extensive interlinkages through maritime technology (MarineTech), ship finance,

maritime law and arbitration. It is a vital enabler for trade and economic activities in sectors such as manufacturing, wholesale trade, and logistics. Globally, the maritime sector is the backbone for trade and moves more than 80% of the global goods across the world.

Update on the Progress of the Sea Transport ITM

6. In the years following the launch of the Sea Transport ITM in 2018, the sector has made significant progress. Pasir Panjang Terminal Phases 3 & 4 were fully operationalised, adding an additional 15 million twenty-foot equivalent units (TEUs) handling capacity to the Port of Singapore. To drive digitalisation and enhance productivity, MPA launched Phase 1 of digitalPORT@SG™ to streamline up to 16 regulatory applications into an integrated port clearance service, and the Sea Transport Industry Digitalisation Plan (IDP) for small and medium (SMEs) enterprises to adopt digital technologies. The launch of the Maritime Transformation Programme has deepened maritime research and development (R&D) capabilities in niche technology areas, e.g. in maritime energy and sustainability, simulation and modelling of future port operations, and development of autonomous ships. To support the maritime workforce, the Professional Conversion Programme (Sea Transport) was launched and trained 160 mid-careerists to join the sector.

7. Despite the COVID-19 pandemic and the current geopolitical uncertainties, the Sea Transport sector has remained resilient. In 2021, our IMC attracted 23 companies to expand or set up operations in Singapore, and Singapore's container throughput achieved a record 37.5 million TEUs, an increase from 36.9 million TEUs in 2020.

Strategies of the Sea Transport ITM 2025

8. Going forward, the Sea Transport sector is poised to see major transformation given opportunities arising from global supply chain shifts, digitalisation and decarbonisation. The Sea Transport ITM 2025 will focus on the following four strategies, elaborated in the subsequent paragraphs (and with key targets underlined):

- Strategy 1: Ensure Relevance and Resilience of MaritimeSG as Key Node in Global Supply Chains
- Strategy 2: Build a Vibrant Innovation Ecosystem and Actively Develop New Growth Areas
- Strategy 3: Support Maritime SMEs and Start-ups to Grow into Global Champions
- Strategy 4: Develop a Future-Ready Maritime Workforce Equipped with Global Skillsets

Strategy 1: Ensure Relevance and Resilience of Maritime Singapore (MaritimeSG) as Key Node in Global Supply Chains

9. The port of Singapore gained the reputation as a “catch-up port” during the supply chain disruptions and global port congestions during the COVID-19 pandemic. The ITM will enhance our port’s connectivity and competitiveness as an essential node in global supply chains and work closely with our ecosystem partners such as the port operators, bunker suppliers, ship suppliers, and other marine service providers by:

- i. **Future-proofing our port’s capacity and capabilities through enhancing physical and digital connectivity and building a future-ready sustainable port of choice. The ITM will also support port automation and technology adoption, to increase productivity of port operations.** Tuas Port remains on track to be completed by the 2040s. When completed, it will be the world’s largest fully automated container terminal, capable of handling up to 65 million TEU containers. Tuas Port and Jurong Port will achieve net-zero emissions by 2050. MPA is also pushing for development, adoption and integration of digital solutions to facilitate seamless data flows through an integrated, efficient and resilient trade supply chain.
- ii. **Strengthening the IMC** by growing a comprehensive range of maritime services to seize opportunities of the future, and partnering companies on key projects in growth areas such as sustainability and digitalisation. In particular, MPA will work with relevant agencies and institutions to broaden and deepen the market for green financing and carbon awareness and accounting. *The Sea Transport sector aims to attract \$20 billion of industry total business spending over 5 years (2020-2024).*

Strategy 2: Build A Vibrant Innovation Ecosystem and Actively Develop New Growth Areas

10. Innovation will remain key as Singapore develops future capabilities and solutions built on emerging technologies such as artificial intelligence, modelling and simulation, data analytics, autonomous systems, robotics, and additive manufacturing. MPA has taken the lead to build a vibrant and supportive maritime innovation ecosystem.

11. The ITM will support Singapore’s ambition to grow into a Leading MarineTech Hub for companies and start-ups. We will accelerate the growth of MarineTech clusters in Singapore by continuing to grow demand drivers, partner start-up multipliers and create an enabling environment bringing together demand drivers, solution providers, and funding. Innovation platforms such as the PIER71™ (Port Innovation Ecosystem Reimagined @ BLOCK71) and the annual Smart Port

Challenge (SPC) have catalysed active partnerships among maritime companies, technology enterprises and research institutions, and attracted investment funds in solutions developed via these platforms¹. *The Sea Transport sector aims to attract more than \$25 million of Venture Capital investments into PIER71™ start-ups and grow the number of MarineTech start-ups supported by MPA from the current 30 to 150.*

12. Maritime R&D capabilities will be deepened and R&D translation will be strengthened in key areas, such as Smart Port, Smart Shipping and Green Technologies. An example is the Global Centre for Maritime Decarbonisation which was established on 1 August 2021 – a large-scale public-private partnership between MPA and six founding partners, which started with \$120 million funding to pilot and deploy green fuels and technologies. The Centre will strengthen the translation of green technologies for deployment by partnering the industry and working with the research institutes on studies and pilot projects to implement identified decarbonisation pathways and create new business opportunities.

Strategy 3: Support Maritime SMEs and Start-ups to grow and realise their potential as Global Champions

13. Given the digital future that the Singapore economy and maritime industry is working towards, it is necessary for our companies to be ready. The Sea Transport IDP has been expanded to cover all Sea Transport subsectors, while funding support has been extended beyond end-2022 to encourage adoption of pre-approved digital solutions. MPA will work closely with ESG to leverage their network of overseas centres and offer schemes and grants such as the Maritime Cluster Fund to help SMEs and start-ups build capabilities to venture overseas.

Strategy 4: Develop a Future-Ready Maritime Workforce Equipped with Global Skillsets

14. Talent is required to drive the transformation of the maritime sector to seize the new opportunities for growth in areas such as sustainability and digitalisation. The Sea Transport sector will support job role redesign to reskill and upskill current workers in the sector to support a more digitalised, high-tech, and sustainable maritime industry. Local talent pipelines will also be strengthened by attracting fresh graduates and facilitating mid-career conversions, including sea-to-shore career progressions. MPA will continue our efforts to promote the maritime sector as an attractive and dynamic sector for job seekers, while helping Singaporeans take advantage of the many opportunities in the maritime industry. *As the maritime industry restructures, grows and transforms, the Sea Transport sector aims to create another 1,000 good jobs for*

¹For example, PIER71™'s growing network of nine Venture Capital partners made available a collective pool of \$80 million in funding.

locals by 2025. New roles requiring skills in data analytics, data science, Internet of Things (IoT) engineering, software engineering, and sustainability management will grow in demand. In addition, we will support workers to undergo skill upgrading as existing roles evolve with increasing emphasis on automation, digitalisation and sustainability.

Transformation Driven by Tripartite Partnership

15. The **Maritime Industry Transformation Tripartite Committee (MITTC)** has been established to spearhead industry transformation of the Sea Transport Sector and contribute to the ITM's 2025 ambitions. It comprises six representatives across the industry, unions and the government – PSA Corporation, Jurong Port Private Limited (JP), the Singapore Shipping Association (SSA), Singapore Maritime Foundation (SMF), the Singapore Maritime Officers' Union (SMOU), and MPA., The MITTC will be co-chaired by Mr Hor Weng Yew, Chairman of SMF, and Ms Quah Ley Hoon, Chief Executive of MPA.

16. Mr. Hor Weng Yew, Chairman of SMF, said, "The Sea Transport ITM was first launched four years ago. This refresh is timely against the backdrop of a number of developments brought about by technology, environmental concerns, and changes to supply chain demands. We need to position our industry to adapt to the changes and to capture new opportunities. The formation of the Maritime Industry Transformation Tripartite Committee demonstrates commitment from the government, unions, and private sector to collectively work through issues to ensure a stronger Maritime Singapore and to achieve our vision for the Sea Transport sector."

17. Ms Mary Liew, General Secretary of SMOU, said, "The maritime industry is a diverse and dynamic one that provides many opportunities for our working people to pursue meaningful careers. With the industry transforming and forging ahead, workers constantly need to re-skill and up-skill themselves to remain relevant and future-ready. It is imperative that we do not leave the workforce behind and the Labour Movement is committed to working closely with our tripartite partners to ensure our workers have the right skills to support growth in the maritime industry, as well as deliver concrete action plans to realise the benefits of the Industry Transformation Map for our working people."

18. Ms. Quah Ley Hoon, Chief Executive of MPA, said "The maritime sector is the lifeblood of global trade, a key pillar of Singapore's economy and supports vital adjacent sectors such as manufacturing, e-commerce and logistics. The ITM will complement our strategy to grow our Global Hub Port and International Maritime Centre and help us achieve our vision for Singapore as a Global Maritime Hub for Connectivity, Innovation and Talent. As the sector transforms, it will also create more good jobs for locals in exciting growth areas, such as decarbonisation, data analytics and ship finance."

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About the Maritime and Port Authority of Singapore (MPA)

The Maritime and Port Authority of Singapore (MPA) was established on 2 February 1996, with the mission to develop Singapore as a premier global hub port and International Maritime Centre (IMC), 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, Port Regulator, Port Planner, IMC Champion, and National Maritime Representative. MPA partners the industry and other agencies to enhance safety, security and environmental protection in our port waters, facilitate port operations and growth, expand the cluster of maritime ancillary services, and promote maritime R&D and manpower development.

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ITM 2025

The Future Economy Council (FEC) was set up in 2017 to support the growth and transformation of Singapore's economy for the future, including the development and implementation of the Industry Transformation Maps (ITMs). ITMs are sector-specific roadmaps to drive industry transformation, support the growth of our enterprises, and help Singaporeans take up quality jobs and seize opportunities. Co-created by the Government, industry stakeholders, and unions, each ITM covers areas such as productivity, internationalisation, innovation, digitalisation, resilience, sustainability, and jobs & skills. To address the systemic shifts arising from the COVID-19 pandemic and other changes in the global economy, the FEC has embarked on ITM 2025, to refresh all 23 ITMs to address the challenges and opportunities for Singapore, our businesses, and our workers.