



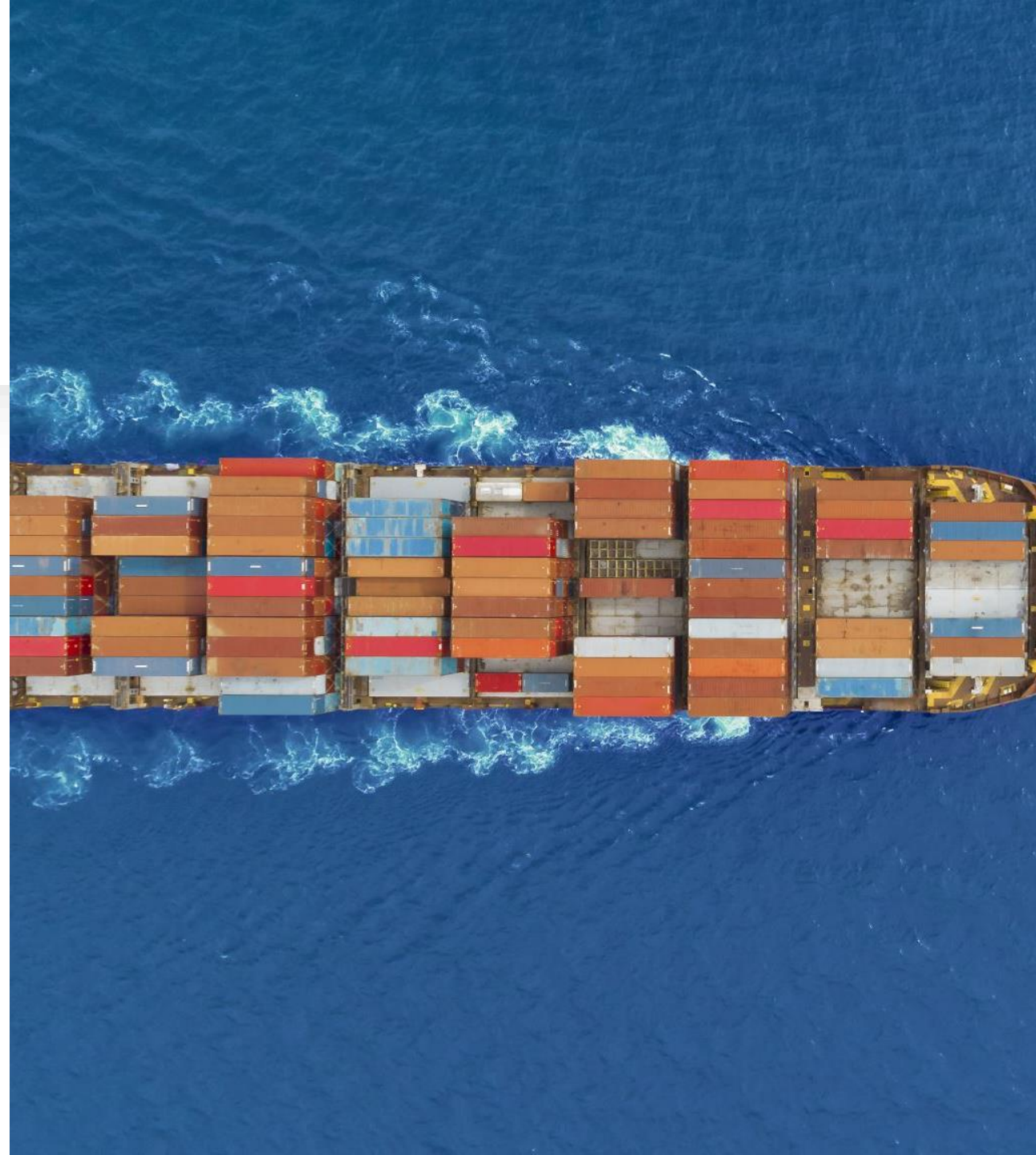
A Digitally Supportive Maritime Legislative Landscape:

**Tailored Lawmaking for an Intelligent
Maritime Sector**

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Intro

- The International Maritime Organization's (IMO) mission:
- ***Safe, secure and efficient shipping on clean oceans***





AI in the context of IMO's Mission

- Artificial intelligence enhances safe and secure shipping.
- Artificial intelligence – essential for achieving efficient shipping.
- Artificial intelligence contributes to better environmental performance in shipping.



From Mission to Regulation

- The IMO's mission of safe, secure and efficient shipping on clean oceans is translated into IMO instruments, including conventions, protocols, guidelines and most critically into national legislation, for compliance and enforcement at the domestic level.

From Mission to Regulation (cont'd)

- Barbados, an IMO Member State since January 7, 1970, embarked on a maritime regulatory reform process on the heels of the 2018 IMO Audit of Barbados, with the overarching aim of:
 - i. correcting the regulatory-related deficiencies identified in the IMO Audit; and
 - i. creating the enabling environment for sustainable development of Barbados' maritime sector.



From Mission to Regulation (cont'd)

The following pieces of national legislation promote the integration and utilization of artificial intelligence in respect of Barbados' ocean sector:

- Facilitation of International Maritime Traffic Act, 2024
- Shipping (Domestic Vessels) Act, 2024
- Marine Transport (Emissions Control) Act, 2024

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From Mission to Regulation (cont'd)

- Merchant Shipping Act, 2024
 - Maritime and Underwater Heritage Act, 2025
 - Seaport Industry (Management, Operations and Development) Act, 2025
 - Seafarers Bill, 2026
 - Maritime Areas (Jurisdiction and Rights) Bill, 2026
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Key legislative highlights



- The discussion will focus on the following areas enshrined within the legislation:
 - i. Vessel clearance
 - i. Port state control
 - i. Autonomous shipping
 - i. Digital twinning
 - i. Space-linked ocean activities

Legislative Highlights (cont'd)

- Shipping (Domestic Vessels) Act, 2024 enables small vessel operators to clear through an approved electronic vessel clearance system.
- This can either be the SailClear or the Barbados Maritime Single Window System.



Legislative highlights (cont'd)

- Vessel clearance through the Barbados Maritime Single Window system
- Facilitation of International Maritime Traffic Act, 2024

Legislative Highlights (cont'd)

- Enhancing port State control through digitalization
 - Part VII, Facilitation of International Maritime Traffic Act, 2024
 - IMO's promotion of maritime single window concept beyond FAL Convention requirements, thus encouraging States to transcend their MSWs from mere clearance portals into holistic, comprehensive automation platforms that digitize other aspects of shipping.

Legislative Highlights (cont'd)

- Para 3.4.2 of the IMO Guidelines for Setting up a Maritime Single Window states:

“MSW should be considered as a technology neutral and trustworthy platform for public private data collaboration to expand its scope beyond regulatory framework to include nautical and operational information and data as a best practice for trade agnostic port call automation.”

Legislative Highlights (cont'd)

- In alignment with the IMO's vision that maritime single windows, should extend beyond the foundational FAL Convention regime pertaining cargo and passenger information, in designing the Facilitation of International Maritime Traffic Act, 2024, it was duly considered that port State control, i.e. the inspection of foreign vessels to verify their compliance with international maritime standards, is an operational aspect that can benefit from being integrated to the maritime single window system.
- A similar thinking prevailed in respect of the MARPOL, Annex VI regime in the Marine Transport (Emissions Control) Act, 2024.

Legislative Highlights (cont'd)

- Embracing the era of autonomous shipping
 - Merchant Shipping Act, 2024
 - Seaport Industry (Management, Operations and Development) Act, 2025
 - Autonomous Operations Code for Ships and Ports
- Embracing the virtual seafarer
 - Seafarers Bill, 2026

Legislative Highlights (cont'd)

- Exploring the realm of digital twinning for the maritime sector
 - Merchant Shipping Act, 2024
 - Maritime and Underwater Heritage Act, 2025

Legislative Highlights (cont'd)

- Bridging new frontiers on the “final frontier”, i.e. space / outer space
 - Relationship between maritime and space codified in the Maritime Areas (Jurisdiction and Rights) Bill, 2026.

Legislative Highlights (cont'd)

- National Seaport Industry Sustainability Program – est. under section 7 of the Seaport Industry (Management, Operations and Development) Act, 2025.
- Program, inter alia, requires the adoption of measures to
 - Deploy green growth technology and innovation in the seaport industry and wider port sector

Legislative Highlights (cont'd)

- Develop industry-specific sustainability frameworks and operational regimes to stimulate investment, and make such investment and seaport industry sustainability goals mutually supportive
- Be consistent with the sustainable development trajectory of the World Ports Sustainability Program, while yet factoring in local circumstances

Conclusion

- Artificial intelligence is integral to the continued sustainability of the maritime sector, especially at the ship-port interface.
- Legislation that is intentionally designed to support the integration of technology and innovation in the maritime sector is also critical.