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Decarbonisation, digitalisation will redefine nation's maritime industry

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Transport Minister, Anthony Loke (c) inaugurated the Malaysia Maritime Week 2025, July 15, 2025. BERNAMA PIC

LETTERS: The Malaysia Maritime Week 2025 concluded successfully last week, marking a pivotal achievement in promoting national maritime agendas, encompassing sustainability, digital innovation and gender inclusivity within the industry.

Currently, the maritime industry is experiencing a significant transformation, notably due to rising technology and growing demands for sustainability.

The transformation necessitates that every industry player adapts, since it is no longer merely a matter of sustaining momentum, but rather of boosting performance.

Currently, the Malaysian maritime industry is at a critical juncture, where two cutting-edge forces, decarbonisation and digitalisation are redefining the national maritime landscape.

As global converge towards a more green and smart future, a critical debate persists, which should come first, decarbonisation or digitalisation?

Decarbonisation denotes the reduction of greenhouse gas emissions, especially carbon dioxide, originating from maritime operations.

This directly addresses the International Maritime Organization's (IMO) aim to attain net-zero emissions in maritime industry by or approximately 2050.

On the other hand, digitalisation entails the implementation of digital technologies, including Artificial Intelligence (AI), Internet of Things (IoT), blockchain and big data to improve operational efficiency, safety, and transparency within the maritime operations.

Although both elements are vital to the industry's future, their prioritisation for implementation is frequently contested due to economic and regulatory challenges.

Many assert that prioritising decarbonisation is crucial given the urgency of the climate agenda. Shipping activities account for around three per cent of global greenhouse gas emissions, and without immediate action, this percentage may increase significantly as global trade expands.

Moreover, regulatory pressure is mounting. The IMO has implemented a set of compulsory measures, including the Energy Efficiency Existing Ship Index (EEXI) and Carbon Intensity Indicator (CII), compelling shipowners to utilize alternative fuels such as LNG, hydrogen, ammonia and methanol, retrofit vessels and so on.

In this perspective, digitalization is auxiliary but not primary. Digitalisation is seen as the catalyst for decarbonisation.

It serves merely as an instrument for quantifying and regulating emissions, rather than being the fundamental element of emission reduction.

Digital technology can mitigate carbon emissions by enhancing energy efficiency and fostering green technology innovation.

Viewing decarbonisation and digitisation as competing targets presents a misleading distinction.

The maritime industry could benefit more from a simultaneous approach, driven by strategic phasing instead of favouring one option over another.

In short, it needs the mutual dependency between digitisation and decarbonisation and all stakeholders i.e. governments, port authorities, and shipping companies must collaborate to expedite low-carbon solutions by enhancing technological capacity.

By doing so, the industry can remain competitive, resilient, and sustainable amid ongoing global uncertainty.

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