# From news buzz to buzzing with activity

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**The maritime industry's future hinges on our ability to effectively integrate cutting-edge technologies like artificial intelligence (AI) and digitalisation, likewise putting weight behind multi-stakeholder projects such as green corridors, translating them from novel ideas into core operational strategies. Globally, ports are voicing their commitment to sustainability and actively exploring transformative technologies to help them move the green needle. Yet, in this landscape teeming with promise and potential, a critical need exists for a discerning eye.**

Distinguishing real, impactful advancements from fleeting trends is not just a matter of choice but a necessity for those steering the future of maritime operations. While ambitious plans and sweeping declarations are easy to make, the true test is their translation into effective, lasting changes. In other words, the crux of this transformation lies in its execution.

This demands more than a cursory look at new technologies; it requires a deep dive into their capabilities, limitations, and real-world applications. The maritime industry, as such, finds itself not just at a point of adopting new technologies but at a moment where understanding their depth and scope becomes paramount.

Maritime industry leaders must, therefore, do what they can to sift through the noise and identify solutions that are both pragmatically viable and sustainable in the long run. We are standing ready not just to witness but to shape a future where technology meets practicality, with technological innovations actively adopted and adapted to redefine maritime operations.

## Wanted: a cohesive digital strategy

Port digitalisation is vital in the maritime industry's on- and offshore journey towards decarbonisation. This process involves more than merely adopting digital tools; it requires a fundamental transformation in how ports operate and interact with their wider ecosystems. Digitalisation paves the way for enhanced operational efficiency, reduced emissions, and a more sustainable maritime environment. However, the path to successful digitalisation is fraught with challenges.

A common pitfall in this journey is a siloed approach to digital efforts. Ports often implement modern tech solutions in isolated segments, leading to a fragmented technological landscape. This fragmentation hinders the seamless flow of information, which is crucial for optimising operations and reducing environmental impact. Instead of isolated upgrades, what is needed is a cohesive digital strategy that integrates various aspects of port operations. This integration enables ports to leverage data comprehensively, fostering informed decision-making and efficient resource utilisation.

Furthermore, an integrated digital strategy is essential to foster collaboration between different stakeholders in the maritime chain. By enabling real-time data sharing and communication, ports can synchronise their activities with shipping companies, logistics providers, and regulatory bodies, creating a more responsive and agile maritime ecosystem.

However, implementing such a digital strategy has its complexities. It demands technological investment and a change in mindset and culture within port authorities and their partners. Embracing digitalisation requires a willingness to innovate and adapt to new ways of working.

While the road to effective port digitalisation is challenging, its importance cannot be overstated. As the maritime industry strives towards a greener and more efficient future, a well-planned, integrated digital strategy will be critical in achieving genuine progress rather than superficial change.

## No room for mistakes

The integration of AI in operations can quickly bring about tangible benefits to port authorities worldwide, with Tanjung Priok being a shining example. Following the adoption of the AI-driven system MarineM, the Indonesian port has achieved a 20% reduction in operational distances for tug and pilot movements, translating not only into emission reductions but also into substantial economic benefits, such as an annual saving of $155k in fuel costs. This success story is a testament to the transformative potential of AI in enhancing port efficiency and sustainability.

The role of AI in ports extends beyond operational efficiency, including predictive maintenance, traffic management, and cargo handling optimisation. These applications significantly reduce delays and increase throughput, making ports more responsive to the dynamic demands of maritime logistics.

Photo: Canva

Realising these benefits necessitates a nuanced approach to developing and training AI algorithms. These systems must be developed with an understanding of the distinct challenges and complexities of maritime environments. In practice, training AI algorithms on tailored datasets and with clear parameters ensures they can adapt to the variable and unpredictable scenarios encountered in real-world port operations and will consistently offer reliable solutions.

Additionally, the safety-critical nature of port operations demands that AI systems are not only efficient but also reliable and transparent. There is no room for mistakes! The high stakes necessitate prioritising accuracy and accountability in AI development, ensuring these systems are robust and will not come up with off-track or unrealistic solutions.

Through careful implementation, AI in ports is poised to revolutionise maritime operations. This technology is both a tool for automation and a conduit for safer, more intelligent, and far more sustainable operations (as evidenced by Tanjung Priok's experience).

## More than a concept

Green shipping corridors are also quickly gaining traction. These specially designated routes focus on reducing maritime emissions by adopting green technologies and practices. They function as test beds for innovations like alternative fuels, energy-efficient ships, and emission-reducing operational strategies.

Establishing these corridors is a step towards tangible environmental improvements, but their success relies heavily on action – not just intent. Implementing green corridors requires a robust digital infrastructure to monitor and manage emissions and fuel usage effectively. Digital tools enable the precise tracking of environmental impacts, helping to optimise operations for greater sustainability. This digital foundation is essential for providing the data and insights needed to make informed decisions and measure the effectiveness of green initiatives.

Green shipping corridors are, therefore, more than a concept; they are a call to action. To ensure their success, they require an amalgamation of innovative technologies, collaborative efforts among industry stakeholders, and a robust digital backbone. Through these corridors, the maritime industry can pave the way for a more sustainable future, demonstrating that commitment to environmental goals goes hand-in-hand with practical and measurable actions.

## Thoughtful approach

The industry's push into AI, digitalisation, and green shipping corridors isn't just about embracing spanking-new technologies for the sake of it; it's about integrating them to ensure lasting, meaningful change. This path requires rigorous scrutiny and a commitment to ensuring these advancements genuinely enhance maritime operations' efficiency, safety, and sustainability.

The maritime sector stands at a threshold of genuinely transformative change. The decisions made today about implementing and integrating new technologies will shape the tomorrow of maritime operations. As the industry navigates these changes, the focus must remain on ensuring that these technological advancements are adapted to meet the unique and complex challenges of the maritime world.

This thoughtful approach will ultimately determine the success and impact of these technological endeavours. ■