# The Path to Digital Transformation in the Maritime Liquid Bulk Industry

## Challenges and Opportunities

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## Introduction

The maritime industry, particularly the liquid bulk sector, is embracing digitalisation step by step but it still faces significant challenges and lags behind other sectors like the aviation industry. Progress is made but the transformation isn't happening as quickly as desired. Key stakeholders, including port operators, shipowners, and regulatory authorities, acknowledge the necessity of digitising processes to drive efficiency, safety, and environmental sustainability.

## About UAB-Online

UAB-Online is a Software-as-a-Service platform that optimises operations in liquid bulk shipping.

Our software enables you to gain insight in the complete announcement process. From document creation to sharing and signing between inland barge or seagoing vessel, inland-, seaterminal, surveyor, agent and shipping company.

We are the leading global digital platform in liquid bulk shipping

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# Pain Points in Digital Transformation

## High Costs and Investment Justification

A major obstacle to digitalization in ports is the high cost of implementing new technologies. Many ports, especially smaller or less advanced ones, hesitate to invest in digital systems without clear and immediate financial benefits, particularly when there isn't widespread demand for these solutions among users.

## A lack of Standardisation

A significant challenge in the liquid bulk industry is the lack of standardization. While Europe has advanced with the European Maritime Single Window initiative, many regions and ports still use outdated methods like paper documentation, phone calls, and emails. National and regional regulations add complexity, requiring ships to follow different standards in various ports, such as ISGOTT 6 and Declaration of Inspection (DOI).

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# Pain Points in Digital Transformation

## Willingness to Change

The maritime liquid bulk industry has long-established practices, many dating back centuries, which makes it a conservative industry. There is a resistance adopting to new digital solutions due to concerns over data security, commercial sensitivity, and the perceived complexity of integrating new systems into their existing operations.

## Complex Stakeholder Ecosystem

Ports are complex ecosystems with various users and operators, including shipping companies, terminal operators, customs, and other authorities. Coordinating digital initiatives across these stakeholders is challenging. Getting everyone on board with a unified approach requires a significant effort and can slow down the pace of change.

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# Pain Points in Digital Transformation

## Paper-Based Systems

In some countries, regulations still mandate paper-based documentation, which diminishes the value of digital solutions. For example, in Germany, regulatory documents must still be printed and physically stamped. This disconnect between digital and paper processes creates inefficiencies and discourages wider adoption of digital practices.

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# Opportunities for Digitalisation

## Paperless Operations

The trend towards paperless shipping is gaining momentum, driven by regulatory initiatives and the growing preference of younger generations for digital processes. The European Union aims to achieve a 100% paperless transport system, and similar trends are emerging worldwide. This presents an opportunity for ports and shipowners to modernise their operations.

## Efficiency and Cost Savings

Digital solutions offer immense potential for operational efficiencies and cost savings. The European Commission's single window initiative alone is projected to save shipping operators approximately 60-70 million euros annually by reducing administrative workloads. This can be further enhanced by eliminating redundant paperwork, standardising data exchange, and introducing automation in liquid bulk cargo and supply chain management.

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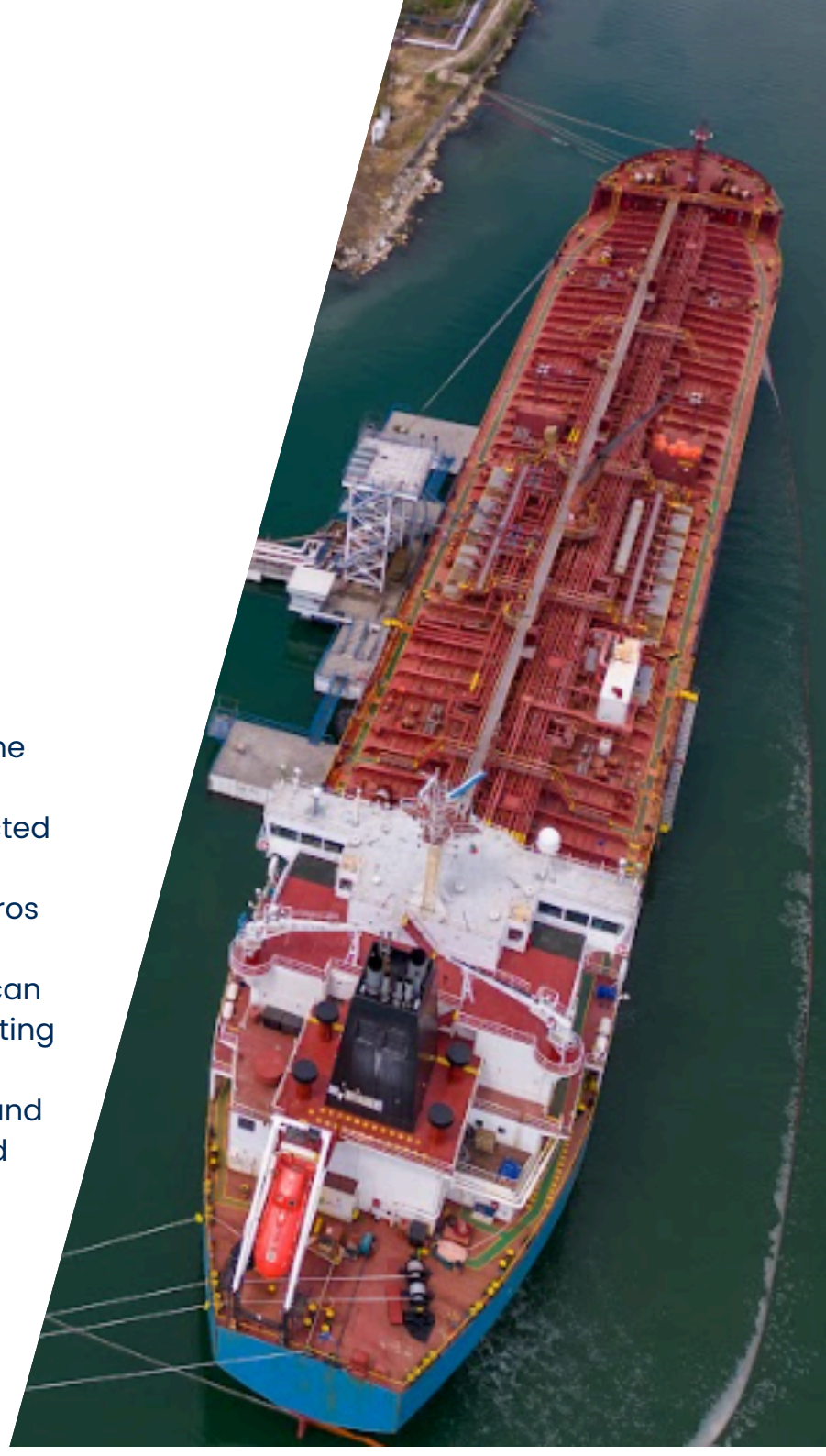

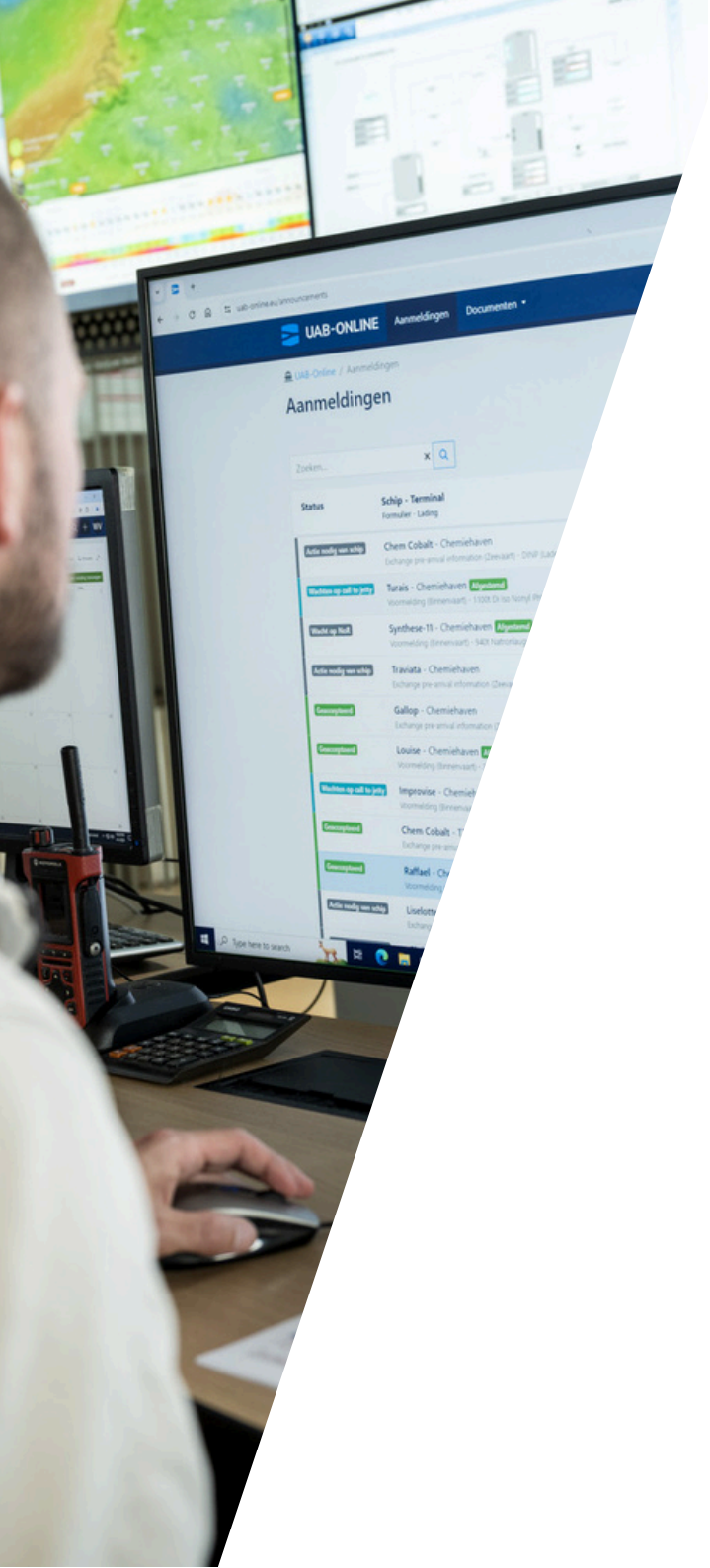


# Opportunities for Digitalisation

## Improved Safety and Environmental Impact

Digital systems can significantly enhance safety by ensuring more accurate communication between ships and ports, reducing human errors, and optimising logistics. Furthermore, digitisation can contribute to reducing carbon emissions by improving efficiency and streamlining port operations, which leads to less idle time and delays.

## Collaboration Between Industry and Regulators

Effective collaboration between regulators and the private sector can drive digitalisation. Initiatives by the European Commission to harmonize data formats are essential. The maritime industry must work together with technology providers, regulators, and other stakeholders to create systems that are both cost-effective and accepted globally.

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# Opportunities for Digitalisation

## Digital Bunkering

In the bunkering supply chain, digital solutions can play a crucial role in enhancing transparency and reducing disputes. For instance, adopting mass flow meters and digital delivery notes in key ports like Singapore and Rotterdam has already improved efficiency and reduced fraud. Expanding these systems to other ports worldwide would create a more seamless, reliable bunker industry.

# Conclusion

While the maritime industry has made progress toward digitalisation, the liquid bulk sector still faces challenges that slow its transformation. By addressing the high costs, standardisation issues, and resistance to change, the industry can unlock significant opportunities for cost savings, safety improvements, and environmental sustainability. Collaboration across stakeholders, combined with regulatory support, will be key in driving the sector toward a fully digital future.

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