



Technology Journalist of the Year 2024 Runner up Submission

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Container shipping industry welcomes digital revolution, DCSA report reveals

In the container shipping industry, players across the supply chain are at varying levels of digital maturity. From cargo owners and terminal operators to legislators and governments, the wide range of participants makes uniformity difficult to achieve. As does the vulnerability of global networks, prone to disruption now more than ever.

It goes without saying that technology poses a solution, improving interconnectedness, communication, and immunity from global disruption. However, this transformation requires collaboration - between disconnected parties with competing interests.

But the [‘State of the Industry’](#) report, released today by the Digital Container Shipping Association (DCSA), marks a pivotal, optimistic moment for the sector. Based on a survey of 400 cargo owners and in-depth interviews with 45 industry stakeholders across 15 legal jurisdictions, it reveals widespread recognition of digitalisation's benefits among stakeholders.

Yet, by elucidating some persistent barriers to adoption, the report marks some crucial factors to consider going forward, emphasising the importance of digital standards, and portending about sustainability.

Smooth sailing

Findings are generally encouraging in terms of the perceived value of digitalisation and sustainability, giving an intimation of exponential growth to come.

Regarding educational awareness, the report found that 86% of cargo owners view digitalisation as a tool for operational efficiency. Notably, 41% of cargo owners ranked supply chain visibility and access to real-time data as their top operational priorities, surpassing cost efficiency.

The report highlights that 82% of cargo owners with higher levels of digitalisation agree that it leads to improved customer satisfaction and experience; 81% believe that it leads to a significant of operational costs; and 86% believe that early adoption of digital technologies provides a competitive advantage.

85% of cargo owners are at least moderately familiar with digital standards, and the same percentage agree that these standards are crucial for achieving seamless operations across the supply chain.

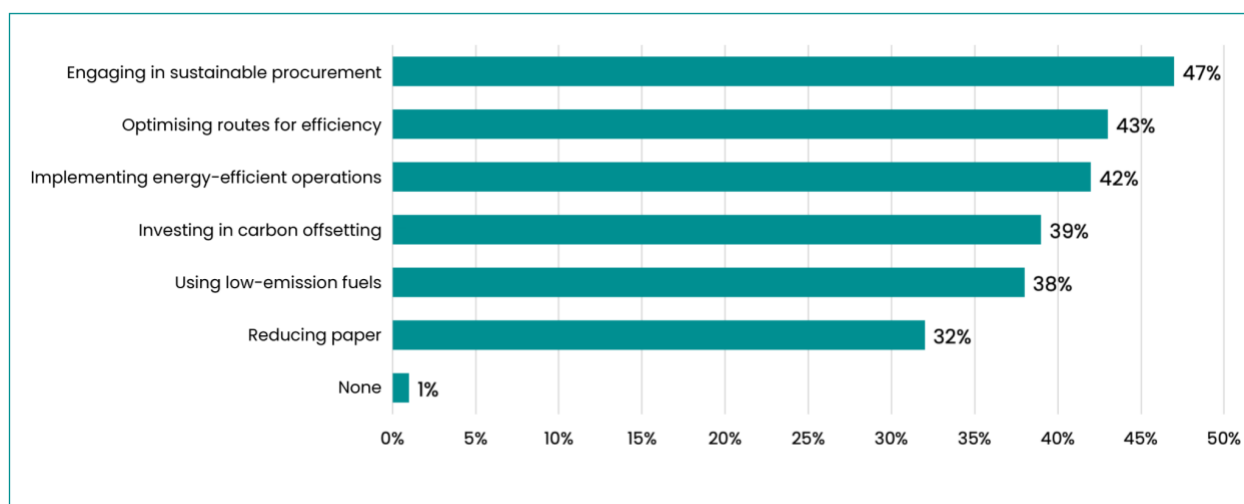
Additionally, the report underscores the growing importance of sustainability in the shipping industry. Ships are responsible for more than 18% of nitrogen oxide pollution, and 3% of

greenhouse gas emissions [globally](#); other controversies include oil spills, wildlife collisions, and generation of bilge water. As a result, it is encouraging to know from the DCSA report that sustainability is being prioritised.

A notable proportion - 65% - of cargo owners rate energy efficiency as one of their top three sustainability goals. Moreover, 83% of cargo owners agree that digitalisation significantly contributes to sustainable practices.

Notably, 43% of cargo owners demonstrate a commitment to reducing environmental impact through efficient logistics by optimising routes. Almost a third (32%) have implemented paper reduction measures, recognising that full adoption of eBL alone could save an estimated 28,000 trees annually.

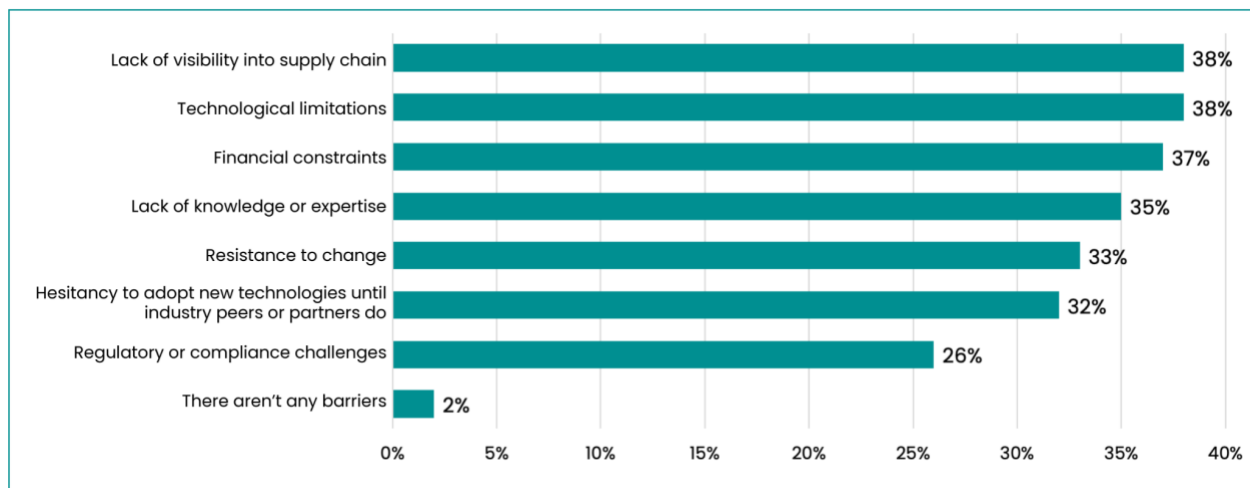
"Companies that made investments in changes related to sustainability have been able to reinvest savings made in new projects around sustainability," said Dave van Diggele, Program Lead, Shippers at DCSA. "This is an encouraging drive and demonstrates how large organisations and corporations are progressing."



Optimism extends to tangible results too. A common gripe regards the slow transformation to electronic Bills of Lading (eBL) from physical documents: according to one estimate, stakeholders could save \$6.5 billion in direct costs just by switching away from the transfer of physical BLs. But this year, eBL adoption reached 5%, up from 1.2% in 2021. Carriers also adopted more DCSA standards in the first quarter of 2024 than in the whole of 2023.

Avoiding perverse incentives

The water becomes choppy when considering outdated infrastructure, lack of proactive investments, and resistance to change: three barriers to digitisation highlighted in the report.



An interesting, often unconsidered hurdle among cargo issuers is the fact that leadership roles are generally occupied by an older demographic. As one transportation director in Singapore noted, “Companies may lack sufficient technical expertise to support the systems and tools needed for digital transformation.”

Shipshape: the regulatory landscape

The DCSA, in collaboration with law firm Baker McKenzie, conducted research across 15 legal jurisdictions, representing 60% of global trade, to understand the regulatory impact on eBL adoption. The resulting report, [‘Overcoming legal and regulatory barriers to eBL adoption’](#), finds that while eBL use is possible in almost all jurisdictions studied, conditions governing its use are often overly prescriptive or too ambiguous, deterring uptake.

The study was instigated by the DCSA’s announcement announced in February 2023 that its nine ocean carrier members committed to 100% adoption of electronic Bills of Lading (eBL) based on DCSA standards by 2030. This shift could save stakeholders around \$6.5 billion in direct costs, enable \$30-40 billion in annual global trade growth, and improve customer experience and sustainability.

However, legal and regulatory barriers to achieving full eBL adoption remain. While eBL use is possible in almost all surveyed jurisdictions, either through explicit or implicit legislation, the conditions for eBL use are significantly diverse, ranging from no conditions to very specific requirements like mandatory registration and the use of accredited IT solutions.

Government procedures also vary across jurisdictions, with customs being the main authority requesting Bills of Lading. While all surveyed jurisdictions allow some form of electronic presentation, many rely on semi-digitalisation, requiring digital copies of paper BLs with “wet” signatures and stamps.

Additionally, private sector parties often request paper BLs due to a lack of legal certainty, legacy practices, or individual risk aversion, even in jurisdictions where no legal barriers exist.

The report concludes that while few hard barriers remain for eBL adoption, legislators, governments, and the private sector must continue to communicate with suppliers and work in synchronisation to achieve 100% eBL adoption by 2030.

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Global trade is projected to double in real terms by 2050. And as its spine, the container shipping industry faces mounting pressure to evolve with a focus on standardisation, sustainability, and collaboration.

The DCSA report functions as a lighthouse, highlighting that the adoption of digital standards could be accelerated with enhanced technology infrastructure, increased awareness and education on the benefits of digital standards, financial incentives for early adopters, greater collaboration among industry stakeholders, and more robust support from regulatory bodies.

Simultaneously, the report is a foghorn that digitalisation can accelerate. 90% of cargo owners say their organisations are ready for digitalisation, but 32% demonstrate a hesitancy to adopt new technology before industry peers, and 66% say they need external support.

The digital transition can move as a speedboat rather than a cruise - but only with adequate, unified efforts all across the supply chain.