



THE GLOBAL SHIPPING INDUSTRY IS TRENDING TOWARD DIGITAL, AND STANDARDISATION IS THE KEY TO UNLOCKING ITS FULL POTENTIAL



Henning Schleyerbach,
COO of Digital Container
Shipping Association (DSCA)

Analysts are predicting freight (including maritime) volumes to triple by 2050, and uncertainty around the timely arrival of goods to continue well beyond 2022. As the logistics industry and governments around the world search for ways to ensure the smooth functioning of international trade, attention has been drawn to the fundamental lack of visibility and transparency in the global supply chain.

While chronic disruption has no single cause, the current state of supply chain logistics is exacerbated by the fact that container shipping still relies heavily on manual or paper-based processes and insufficient or delayed data exchange. This lack of digital maturity decreases container visibility, which creates costly inefficiencies as well as unnecessary and unexpected delays across the end-to-end container journey.

Without a paradigm shift in the way data is exchanged, double digit trade growth also means double-digit growth in waste, which in shipping translates into tonnes of paper and greenhouse gas emissions per year. Mounting pressure from all sides is leading the industry to take its environmental, social and governance (ESG) responsibilities seriously.

CURRENT ISSUES SET THE STAGE FOR FUTURE SOLUTIONS

Data exchange

Currently, container shipping stakeholders are limited in their ability to seamlessly exchange digital data across all participants in the supply chain, and there are

no standards for real-time digital data communication. As a result, when unexpected delays occur, they cannot be communicated quickly enough for mitigating actions to be taken. The impact of this ripples across the supply chain causing congestion at port, leaving cargo owners unable to effectively manage exceptions, and causing ships to burn more fuel than is necessary.

A recently published IMO study estimates that between 4 per cent (12 hours before arrival) and 14 per cent (port to port) of the fuel used per voyage, representing 6 to 19 million tons of CO2 per year, can be saved through more efficient exchange of port call data. This is equal to 3 per cent to 10 per cent of the total emissions of the container shipping industry.

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Documentation

Delays and inefficiency are caused not only by a lack of cargo visibility, but also by a lack of documentation. The documents needed to complete an international trade transaction are often not standardised or digitally available, such as the bill of lading (BL). This can require physical hand-off between participants, which is inefficient, expensive and error prone. At the beginning of COVID-19, cargo would get stuck at port waiting for bills of lading to be delivered by flights that were delayed.

Despite this, at the end of 2021 only 1.2 per cent of BLs was electronic. The DCSA estimated that a minimum of 16 million original paper BLs are issued by ocean carriers per year, costing the industry around \$11 billion.

Research from the Economic and Social Commission for Asia and the Pacific (ESCAP) suggests that emissions savings from fully digitalising regulatory procedures around trade could save between 32 and 86 kilograms of CO2 equivalents per end-to-end transaction.

The 56-nation Commonwealth (including the UK, Canada, India and Australia) also set out to quantify the difference standardised digitalisation of trade documentation could make. Its analysis, published in April 2022, found that widespread acceptance of digital trade documents could generate an additional \$1.2 trillion in trade by Commonwealth countries by 2026.

Achieving the results suggested by these studies requires an

interoperable infrastructure for the seamless, end-to-end exchange of good shipping data. Central to this is the widespread adoption of open-source digital standards.

Global sentiment shifts toward digital standardisation

As the search for ways to minimise supply chain disruption and environmental impact continues, standards-based digitalisation is gaining traction in container shipping and multi-modal cargo transportation.

In the US, the Biden Administration launched the Freight Logistics Optimization Works (FLOW) initiative, which aims to develop an information sharing initiative to pilot key freight information exchange between parts of the goods movement supply chain, leveraging standards to improve data accuracy.

The U.S. Federal Maritime Commission announced that standards will play a major role in its Maritime Transportation Data Initiative (MTDI), which aims to harmonise data exchange among supply chain participants.

In the UK, the legislative agenda set out in the 2022 Queen's Speech included the Electronic Trade Documents Bill, designed to enable greater digitisation of trade-related paperwork.

WHAT DOES THIS MEAN FOR THE FUTURE OF THE INDUSTRY?

Over the coming five years, organisations that fast-track their digitalisation efforts based

on industry standards will gain significant competitive advantages over those that don't, similar to what has happened in aviation and other industries in their journeys to digitalisation.

By adopting standards, stakeholders in international trade will free up resources currently spent maintaining legacy solutions to invest in innovation. This will enable them to offer better cargo visibility, real-time responsiveness, and as a result, greater reliability and a better customer experience.

Companies that adopt digital standards will also be leaders in the sustainability movement, which, in the coming decades will become a major focus for governments and the logistics industry. By adopting early, they will be able to lessen their impact on the environment and deflect potential legislation that may mandate ambitious environmental targets.

We can likely expect a more robust and resilient shipping industry emerging from the disruption of the last few years. It should be one that learns from the exposure of its existing inefficiencies and seeks to proactively address them before another crisis arises. If achieved, the shipping industry will be well placed to meet the ever-growing demands of a fully industrialised world.

FUTURE-PROOFING THE SUPPLY CHAIN

The need to replace antiquated processes with timely, reliable digital data communication is clear. Taking a standardised, scalable approach to this transition is the only way to future-proof such a fragmented, complex and global industry.

DCSA works in collaboration with a wide array of stakeholders to develop digital standards that increase visibility by enabling the seamless exchange of real-time data between all supply chain participants. In the short term, widespread adoption of DCSA standards will increase

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the efficiency, reliability and sustainability of container shipping while fostering innovation and a better customer experience.

Over the long term, universal access to accurate, real-time data will help the entire industry become more agile, resilient to change and responsive to customer demand and market forces. This will enable not only container shipping, but the global economy to better withstand the effects of disruption.

Collaboration among industry stakeholders is crucial to transforming the industry, and DCSA is actively seeking involvement and input from all relevant stakeholders. Interested parties can engage with DCSA by subscribing to DCSA updates and making contact through their website, www.dcsa.org.

ABOUT THE AUTHOR:

As the COO of DCSA, Henning is responsible for the development and adoption of technology standards that enable digital transformation in container shipping.

Prior to joining DCSA, Henning led various international projects and strategic initiatives at Hapag-Lloyd for more than 20 years. His achievements included transformation of their global e-business, sales and customer service platforms, as well as process and operations standardisation. Most recently, Henning held the position of Senior Director for Customer Relationship Management at Hapag-Lloyd.

With broad industry experience, Henning has in-depth knowledge and a passion for shaping the future of digital shipping. Henning holds a degree in Physics from the University of Berlin.

ABOUT THE ORGANISATION

Digital Container Shipping Association (DCSA) is a neutral, non-profit group founded by major ocean carriers to digitise and standardise the container shipping industry. With the mission of leading the industry towards systematic collaboration, DCSA drives initiatives to make container transportation services transparent, reliable, easy to use, secure and environmentally friendly. DCSA's open-source standards are developed based on input from DCSA member carriers, industry stakeholders and technology experts from other industries. DCSA member carriers include: MSC, Maersk, CMA CGM, Hapag-Lloyd, ONE, Evergreen, Yang Ming, HMM and ZIM. Please download DCSA standards at www.dcsa.org.