A guide on eBL in the shipping industry

HOW TO NAVIGATE THE TRANSITION FROM PAPER BILL OF LADING (BL) TO eBL

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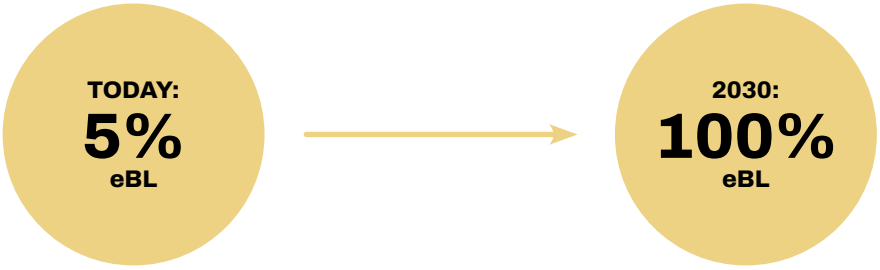
INTRODUCTION



You are likely reading this on a digital device.

In the last week you've probably done your banking, communicated, and maybe even booked a flight, an Uber or a holiday — all digitally. You may even find it hard to remember when you last needed a paper document.

Yet in international shipping, almost 96% of trade documents are still paper–based.[1] 11 billion metric tons of cargo shipped every year, with 44.5 million paper documents. [2]

But that is all changing.

In February 2023, DCSA announced a multi-carrier agreement to get to 100% usage of electronic Bills of Lading (eBL) by 2030.

The benefits of the eBL are many and huge. In the announcement, DCSA wrote: "Switching away from the transfer of physical paper bills of lading could save $6.5 billion in direct costs for stakeholders, enable $30-40 billion in annual global trade growth, transform the customer experience and improve sustainability."

As the most important document in shipping, digitalising the Bill of Lading will be the first major step in the digital revolution of documentation in shipping.

But what exactly is the eBL, how does it work, how is it currently used, and how exactly will we move to 100% industry adoption by 2030?

That's what this e-paper is about.

Our intention is for this to be a useful guide for anyone involved in the transition from paper Bill of Lading (BL) to eBL and to help shed light on what is required next to make 100% eBL become a reality.

We've overcome the first big hurdles (creating the standard, setting industry-wide targets), but now a new set of challenges arise, which must also be addressed head-on, in the quest for industry-wide adoption.

This is an exciting time for shipping and we're fortunate to be part of the early phase of this digital transformation that will do so much for the industry.

We thank you for reading and for your support and interest.

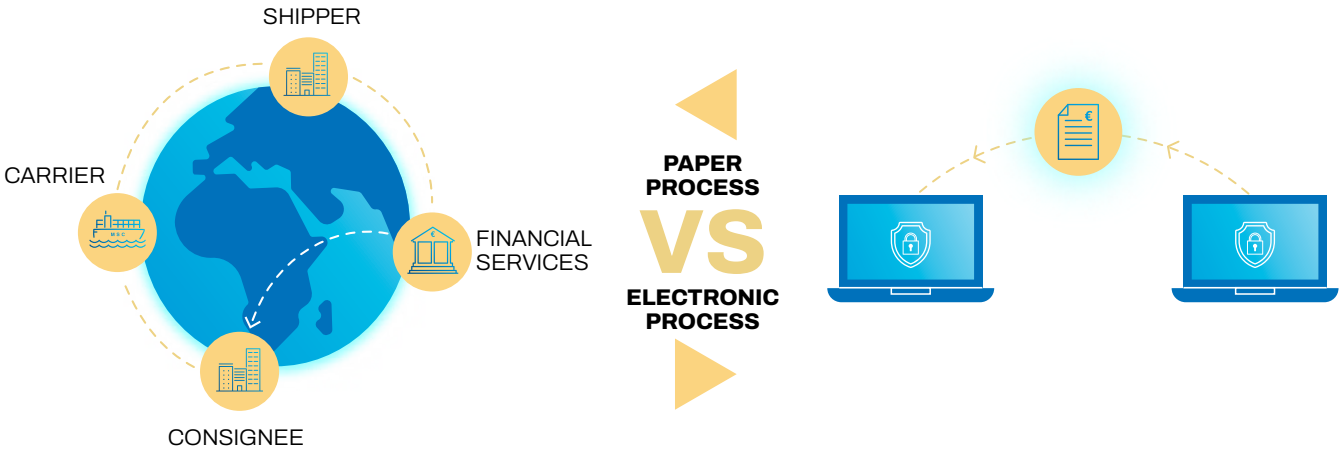
/ Lutercia, Patrick and André, June 2023

Source:

[1] This number is based on DCSA statistics combined with internal MSC numbers.

[2] UNCTAD statistics

BL VS eBL – WHAT'S THE DIFFERENCE?



Before we dive further into the topic of the eBL – the advantages and the challenges – let's take a minute to get the definitions straight.

WHAT IS THE BILL OF LADING?

The Bill of Lading is the most important document in shipping.

It is a legal document issued by the carrier to the shipper that outlines the type, quantity and destination of goods being carried. It is evidence of the contract of carriage (including all terms and conditions), a document of title for goods in transit, and a receipt of the goods being received.

In simple terms, it's a legal record of what's being shipped, who is shipping it, who is receiving it, and the terms of that contract.

WHAT IS THE eBL?

The eBL is a digital version of the Bill of Lading. It replicates the exact function of the Bill of Lading without the need of a paper document. All parties involved in a cargo shipment booking can handle, transfer, endorse, surrender and manage the bill of lading electronically through a secure network. Just like the regular Bill of Lading, the digital document can only be accessed by one party at a time.

There are currently multiple different platforms on which to issue and manage eBLs (e.g. WAVE BL, CargoX, edoxOnline, essDOCS).

Some eBL platforms (e.g. essDOCs) are centralised, where transactions are processed on a network operated by one entity, while others are decentralised (WAVE BL, Cargo X, edoxOnline) where transactions are handled on a distributed ledger network using blockchain technology.

Ocean carriers issue around **45 million bills** of lading a year	In 2021, only **1.2%** of these were electronic	**76,457** eBL issued in 2022 alone	**3.3%** of total Bills of Lading	**5** carriers using eBL solutions

Source:
DCSA statistics

THE FIVE KEY ADVANTAGES OF eBL

With the basic definitions in place, now let's turn our attention to why eBL is such an important development – and ultimately why we wanted to write about it. We've identified five key advantages of eBL.

1 

SAFER:
NO RISK OF DOCUMENT LOSS, FORGERY, OR FRAUD

As a paper document, the paper bill of lading is at risk of being lost, damaged, or subject to forgery. As an official document of title, document tampering can result in illicit shipments, misdeclared cargo, or shipments being released to unauthorised parties.

Decentralised eBL solutions solve these problems by processing all transactions on a decentralised blockchain network. The data is encrypted, unable to be duplicated, and access is limited to only the authorised party at the right time. The risk of loss, damage, fraud, or forgery are virtually zero.

One study by McKinsey predicts that illegal trade could be reduced by as much as 10 to 15% globally through the wide-spread adoption of the eBL [3]. Importantly, the eBL has the support of insurers. The International Group of P&I Clubs now recognises the eBL.

2 

FASTER:
THE DOCUMENT IS TRANSFERRED IN MOMENTS, INSTEAD OF WEEKS

In a single shipment, a single paper Bill of Lading may be couriered up to 10 times, taking several weeks. Any disruptions in transit, or other issues with documentation can cause delays that result in cargo sitting idle at its destination, costing time and money.

The eBL, on the other hand, is processed instantly and is accessible by the authorised party, wherever they are in the world, whatever time of day or night. This significantly reduces the time it takes to process a Bill of Lading, and as a result, release a shipment. Further, any issues with the documentation can be resolved much faster, without the need for printing and couriering new paper documents.

3 

GREENER:
PAPERLESS PROCESS, REDUCED CARBON FOOTPRINT

Around 45 million bills of lading (and billions of pages) are issued by ocean carriers every year. In addition to the carbon emissions associated with couriering the document across the world, the paper bill of lading is an entirely environmentally unsustainable approach to trade documentation.

As a completely digital solution, the eBL is a cleaner, greener and more sustainable approach to trade documentation.

A study by McKinsey estimates that 100% eBL adoption would save 28,000 trees per year, equivalent to around 39 football fields of forest [4]. Research by ESCAP, the Economic and Social Commission for Asia and the Pacific, suggests that fully digitalising regulatory procedures around trade could save between 32 and 86 kg of CO_2 for each end-to-end transaction [5].

4 

SIMPLER:
EASY-TO-USE PLATFORM, ACCESSIBLE FROM ANY DEVICE AND AVAILABLE 24/7

The paper Bill of Lading can only be accessed in person, in one specific location. If the authorised party cannot access the physical document for whatever reason, it cannot be actioned.

The eBL is accessible anytime, anywhere from any device, providing protection from disruptions and allowing faster processing. As a digital document, it offers a smarter, easier and instant solution allowing people to collaborate across time zones without needing to be in the office. As flexible working arrangements become more common across the globe, allowing instant access to the eBL reduces potential delays and helps speed up processing time.

5 

COST-EFFICIENT:
REDUCED COURIER FEES, REDUCED WORKLOAD AND ZERO PAPERWORK TO PROCESS OR STORE

From a cost-efficiency perspective, the transition to the eBL represents an enormous cost saving. Fewer administrative costs, courier fees, and costs associated with reissuing lost, damaged or fraudulent Bills of Lading could result in significant annual savings across the industry.

DCSA research indicates that with just 50% eBL adoption, the industry could save up to US$4 billion per year, and a McKinsey article — 'The multi-billion-dollar paper jam: Unlocking trade by digitalising documentation' – suggests that switching away from the transfer of physical paper Bills of Lading could save US$6.5 billion a year in direct costs for stakeholders.

Paper-based processes are expensive, and according to the International Chamber of Commerce (ICC), they place an extraordinary burden on small and medium-sized enterprises (SMEs) especially, many of whom cannot secure the necessary finance. Digital documentation would reduce the cost of global trade, and likely reduce the $1.5 trillion annual global trade finance gap (the amount of trade finance requested but rejected).

McKinsey's analysis indicates that the eBL could unlock more than $15.5 billion in direct benefit to the shipping ecosystem and up to $40 billion in increased trade.

Source:
[3]DCSA 2023
[4]McKinsey & Company
[5]DCSA 2022

THE CHALLENGES - THREE MAJOR BARRIERS TO ADOPTION

In 2019, the conversations around eBL involved a lot of buzzwords. There was excitement for the possibilities and the long-term value, but less focus on the practical steps to make it a reality.

2023's TPM (the annual global container shipping conference in Long Beach) showed us how far we have come.

The focus has shifted from startups and technology providers to how the incumbents can make widespread eBL adoption a reality. Big picture buzzwords have given way to direct integration, APIs, automation and data quality. Nice-to-haves have become must-haves.

In short, the conversation has moved from why to how, and with a clear goal of achieving 100% eBL adoption by 2030, the how is more important than ever.

Achieving this goal will have its challenges, and in this section we explore three of the major barriers to adoption, and some practical thoughts on how to overcome them.

1 INTEROPERABILITY

The primary barrier to adoption of the eBL is interoperability.

The paper Bill of Lading is accepted globally by all parties. As a single paper document it requires no special platform or tools to access. The same document works for all shippers, banks, customs, and carriers, wherever they are in the world. This same level of interoperability is essential for the eBL, and replicating the existing process is a key step to reducing the friction in adoption. The fewer process changes that need to be made, the easier it is to adopt.

The challenge however is that each technology solution provider approaches the eBL in its own way. These differences, if not addressed early, mean that we could end up with platform-exclusive eBLs. For example, if an eBL is issued by one platform, then every party involved in the transaction must also use the same platform.

This is unsustainable over the long term.

An eBL issued on WAVE BL, Bolero, CargoX, edoxOnline, essDOCS or any other future platform needs to be easily managed and accessed by any of the platforms. Similar to how Bluetooth allows connection to any number of devices, the eBL itself should be an industry standard format, with the solution providers adding value in other ways.

Siloed solutions will not work. The sooner industry standards can be established, the faster the path to adoption.

DCSA (Digital Container Shipping Association) has proposed and advocated for these standards, not just for the eBL, but to lay a foundation for the future of digital documentation in the container shipping industry.

These standards also align with the UN/CEFACT (United Nations Centre for Trade Facilitation and Electronic Business) multimodal transport reference data model to ensure a global industry framework that accelerates digitalisation through a unified industry effort.

The eBL is the spearhead for digital documentation in global trade, and standards are the foundation on which the future will be built.

2 MULTI-STAKEHOLDER SUPPORT

As the most important document in shipping, the Bill of Lading involves many different parties. Between shippers, carriers, customs, banks, insurers and regulators; the 100% adoption target of the eBL will depend on each party recognising the importance of the eBL, and integrating it into their operations.

But that is easier said than done. The incentives for some are stronger than others, and the friction could make some adoption curves slower than others.

Banks, for example, play a major role in funding and financing container shipments. If they do not accept the eBL, then neither can their customers. This would be a major impediment to widespread adoption of the eBL. For example, even if a shipper's bank accepts eBL, but a consignees bank does not, then they would be forced to use a paper Bill of Lading.

So long as vital links in the chain insist on a paper Bill of Lading, eBL adoption will be slowed.

Many banks, however, are already taking the initiative. French bank Societe Generale, for example, is already embracing new solutions with its Payment & Transaction Banking Business Accelerator, collaborating with WAVE BL and other fintechs for better digital payment solutions for their customers. Other banks, such as HSBC, have also shown support in adopting the eBL.

While in the short term banks who have not adopted the eBL will be an impediment, in time banks not accepting the eBL will risk losing customers. A few large customers willing to change to banks who do offer eBL support will likely be just the incentive banks need to accelerate adoption.

Adoption isn't always a simple matter. Banks have high security and legal compliance standards to meet, and these can vary by jurisdiction. As we know, change is hard and can take time, but it's not a matter of if, but when adoption takes place.

The adoption challenge of banks is similar for customs authorities, who play a key role in international trade, assessing imported goods and applying duties, tariffs and ensuring they meet local safety standards.

Again, the adoption curve will depend on the balance of friction and incentives.

Already we have seen customs authorities of certain regions (like Singapore and the UK) leading the way in adoption. The volume of trade, degree of government support, and recognition of the benefits of digital documentation will likely be the key factors in determining how soon a region adopts and accepts the eBL.

For those regions still heavily dependent on paper documentation, providing the right education, support and incentives can help accelerate adoption. But beyond the will to adapt, again, comes the matter of unified standards — both technical and legal.

To assist this, initiatives like The Future International Trade (FIT) Alliance will play a key role. A collaboration between DCSA, BIMCO, FIATA, the International Chamber of Commerce (ICC) and SWIFT, FIT is a memorandum of understanding in which each organisation has committed to working together to standardise the digitalisation of international trade documents.

These global, cross-industry collaborations are essential to overcome the friction, and accelerate adoption of the eBL, and the future of digital documentation in global trade.

3 DIGITALISING ALL DOCUMENTS

Achieving the goal of 100% eBL adoption by 2030 is not just a matter of digitalising the BL, it will also require the digitalisation of other documents.

The eBL is the first of what will be a digital documentation revolution. As long as a shipment still requires paper documentation, the effectiveness (and perhaps adoption) of the eBL will be limited.

For example, many goods shipped require other documents alongside the Bill of Lading, such as certificates of origin/authenticity, or health certificates that ensure goods meet the regulations and standards of the importing country. While these can apply to many types of goods, they are most common in reefer shipments.

As long as these supporting documents are still paper-based, there will be less incentive to adopt the eBL. While these shipments may benefit from the speed, efficiency and security of the eBL, waiting for paper documents to be stamped and signed may negate that impact.

To achieve the goal of 100% adoption by 2030, the focus needs to shift from the eBL alone, to the digitalisation of all trade documents. The sooner we can embrace a new paradigm for international trade, the sooner we can reap the benefits.

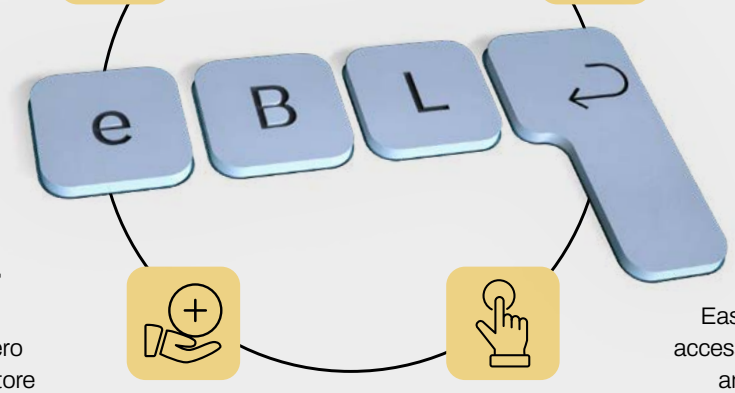
KEY TAKEAWAYS

KEY ADVANTAGES OF THE eBL

FASTER
The document is transferred in moments, instead of weeks

SAFER
No risk of document loss, forgery, or fraud

GREENER
Paperless process, reduced carbon footprint



COST-EFFICIENT
Reduced courier fees, reduced workload and zero paperwork to process or store

SIMPLER
Easy-to-use platform, accessible from any device and available 24/7

KEY CHALLENGES FOR EBL

1 **INTEROPERABILITY:**
The eBL must be able to work seamlessly across all eBL solution providers' platforms. This will require unified technology standards adopted by all parties.

2 **MULTI-STAKEHOLDER SUPPORT:**
Shippers, consignees, carriers, banks, customs, insurers and regulators must also be willing to adopt the eBL into their operations. This requires collaboration.

3 **DIGITALISING SUPPORTING DOCUMENTS:**
Many other trade documents are still issued and managed via paper. Requiring a hybrid of digital and paper documents for a shipment is likely to slow adoption.

KEY NUMBERS

DCSA announced a multi-carrier agreement to hit **100%** eBL adoption by 2030

Today, only **3.3%** of total Bills of Lading are eBL

eBL adoption could save **US$6.5 billion** a year in direct costs for stakeholders

eBL adoption could enable **US$30-40 billion** in annual global trade growth

100% eBL adoption would save **28,000** trees per year worth of paper

CONCLUSION

The eBL is just the first step in what, in time, will be a global transition to digital trade documentation. The world we live in is digital-first, and the transition away from paper documentation to faster, more secure, more efficient, and more sustainable digital versions is inevitable.

It won't be without its challenges, however. As outlined in this paper, digitalising global trade documentation involves many stakeholders across the globe, each with their own requirements, restrictions, and ways of operating. Collaboration is key to work through these challenges, and it is inspiring to see the increasing support and commitment toward 100% eBL adoption by 2030.

The foundations we lay, and the learnings we pick up along the way, will forge the path for the future phases of digital documentation. Most importantly, as we progress through the inevitable challenges, we must remember that this isn't really about documents — it's about creating a global container shipping industry that can support the demands of the modern world.

In closing, we thank you for reading. Your interest and support plays a powerful role in achieving 100% eBL adoption by 2030, and as a result, creating a more efficient, secure and effective container shipping industry.

ABOUT THE AUTHORS



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