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Digital logistics and the electronic bill of lading (eBL)

Why is the paper bill so hard to digitise, what does MLETR change, where does Türkiye stand and what can you do today?

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SHORT ANSWER

An electronic bill of lading (eBL) is an electronic record that performs the functions of a paper bill. The main obstacle is legal rather than technical: the bill is a document of title, and that status rests on physical possession. UNCITRAL's 2017 Model Law on Electronic Transferable Records (MLETR) solves this by replacing possession with 'control'. The UK, Singapore and France, among others, have legislated on the basis of MLETR; Türkiye is not on UNCITRAL's list. Reform work by Türkiye's Ministry of Trade and the EBRD is under way, but no draft has been published.

Why is the paper bill of lading hard to digitise?

A bill of lading does three jobs: it evidences the contract of carriage, it is a receipt for the cargo and, when made out to order or to bearer, it is a **document of title** to the goods. Whoever holds the bill has constructive possession of the goods and can demand delivery from the carrier. Endorsing and handing over the bill transfers the goods with it.

That is exactly where the problem starts. The law of negotiable documents rests on **physical possession**: holding the paper. A PDF can be copied endlessly. If you cannot say which copy is the original and who holds it right now, neither endorsement nor delivery can be done safely. This is known as the **singularity** problem.

That is why the first generation of eBL systems, Bolero for example, relied not on statutory recognition but on a multi-party contract signed by users (a rulebook). As legal commentary notes, before the 2023 legislation in the UK, electronic trade documents could only work through contracts of this kind. A contract binds only those who sign it; for a bank or buyer outside the system, the record does not carry the force of the paper bill.

For the types and functions of the bill of lading, see **The bill of lading**.

MLETR: "control" instead of possession

On **13 July 2017** UNCITRAL adopted the Model Law on Electronic Transferable Records (MLETR). It aims to let electronic equivalents of transferable documents such as bills of lading, bills of exchange, promissory notes and warehouse receipts be used legally both domestically and across borders. It rests on three principles: non-

discrimination against electronic means, **functional equivalence** and **technology neutrality**. A registry, tokens or a distributed ledger are all possible.

Concept	What it means	Paper equivalent
Control	A reliable method establishes a person's exclusive control of the record and identifies that person	Holding the bill (possession)
Identifying the authoritative record	It can be determined which of the copies is "the" electronic transferable record	A single original (singularity)
Integrity	The record is protected against unauthorised change from creation until it ceases to have effect	An untampered document
Reliable method	The functions above are performed by a reliable system; the Model Law includes a general standard for assessing reliability	—

The Model Law also covers the change of medium from paper to electronic and back, and prohibits discrimination against electronic records created abroad. The UNCITRAL page does not use the word "singularity"; it describes the function as identifying the authoritative record.

Which countries recognise eBLs?

UNCITRAL's status page lists 13 states, plus Abu Dhabi Global Market (ADGM), with legislation based on or influenced by MLETR. Examples: Bahrain (2018), Singapore (2021), the UK (2023), France (2024) and China (2025, for bills of lading only). **Türkiye is not on the list** (checked 9 November 2026).

Not being on the list does not always mean eBLs are not recognised: Germany is not listed, but its commercial code has its own eBL provision.

Country	Legislation	Key point
United Kingdom	Electronic Trade Documents Act 2023 (ETDA)	Royal Assent 20 July 2023, in force **20 September 2023**. It does not apply to bills issued before that date. The electronic document must be held in a **reliable system** that distinguishes it from copies, prevents unauthorised changes and stops more than one person using it at a time. Under those conditions it can be possessed and endorsed.
Singapore	Electronic Transactions (Amendment) Act 2021	In force on **19 March 2021**; incorporated MLETR with modifications and made eBLs legally equivalent to paper bills.
France	Loi n° 2024-537 (13 June 2024) and Décret n° 2025-811 (12 August 2025)	The law recognised electronic transferable documents. The decree set out the conditions for a "reliable method", entered into force on 15 August 2025 and also amended the transport code. Secondary sources imply that bills of lading are expressly covered; we could not confirm this from the article text.
Germany	Commercial Code (HGB) § 516	An electronic record that performs the same functions as a bill of lading is treated as equivalent if its authenticity and integrity are assured. The code authorises the details to be set by regulation.

Where does Türkiye stand?

The law: The bill of lading is governed by the maritime provisions of the Turkish Commercial Code (TTK). According to the legal literature, the basis for an electronic bill is **Article 1526(2) TTK**: it allows transport documents, including order bills, to be signed electronically. We could not check the wording against the primary text; look it up on mevzuat.gov.tr before relying on it.

Our assessment: This provision may give a basis for electronic issuance and signature, but it does not set out in detail MLETR's mechanisms of "control = possession", a single authoritative record, a reliable system and electronic endorsement. That is why Türkiye is not considered MLETR-aligned.

Reform work:

- **January 2024:** TİM, the Turkish Exporters Assembly, citing the Ministry of Trade, announced the "Legal Reform to Support Digital Trade" project launched by the EBRD. The reference text is MLETR; the aim is to allow documents such as bills of lading, bills of exchange and transport documents to be issued and endorsed electronically. The first phase included surveys of banks and companies.
- **September 2026:** According to an interview with a bank executive published by Trade Finance Global, the process is at the **legislative drafting** stage. No choice has yet been made between a separate digital documents law and amendments to existing laws. This comes from a single source and is not an official statement.
- **No published draft:** We found no bill submitted to the Turkish parliament and no draft released for consultation.

Industry: pledges, standards and approved systems

The DCSA 2030 pledge

On **15 February 2023** nine DCSA member container lines (MSC, Maersk, CMA CGM, Hapag-Lloyd, ONE, Evergreen, Yang Ming, HMM, ZIM) announced a joint pledge:

- **50%** of original bills of lading **within five years**,
- **100% by 2030**, to be eBLs based on DCSA standards.

A common mistake: "50% by 2025" is wrong. The official pledge is "50% within five years"; counting from 2023, that is around 2028. According to secondary sources these nine lines represent about three quarters of global container trade.

How far has adoption got?

According to secondary sources citing DCSA data, the eBL share in container shipping is still low but rising:

Period	eBL share	Source
2021	about 1.2%	GTR, citing a DCSA report

Period	eBL share	Source
2023	3–4%	GTR, citing a DCSA report
First half of 2024	about 5%	GTR, citing a DCSA report
Mid-2025	about 11%	Breakbulk News, citing DCSA data

Some reports quote survey results such as "half of respondents use eBLs"; these are not the share of bills of lading, so do not mix the two up.

BIMCO

- **eBL Clause 2014:** BIMCO's clause governing the use of eBLs under charter parties (as reported by Skuld).
- **eBL Standard:** The first version for dry bulk was published in 2022 with 20 data fields. According to a September 2026 report, **V2.0** has 36 fields, is aligned with UN/CEFACT and is consistent with CONGENBILL.

P&I clubs and approved systems

Under P&I club rules, cargo liabilities arising from paperless trading systems are covered if the system has been approved by the **International Group of P&I Clubs (IG)**. For a carrier, the choice of platform is therefore an insurance question.

Since **20 February 2025** the IG has applied a new process. Systems that meet both of the following are "deemed approved":

1. They are subject to a law that gives the electronic record the same legal status as a paper bill (for example the UK ETDA 2023 or a law based on MLETR),
2. Their reliability is shown by an independent audit, a regulatory statement or an industry standard.

The IG's current list has **15 approved** and **6 deemed approved** systems. The approved systems include Bolero, CargoX, ICE CargoDocs (formerly essDOCS), IQAX eBL, edoxOnline and WAVEBL. The standard cover exclusions, such as delivery without presentation of the electronic record, apply to eBLs just as they do to paper.

Interoperability and the UN Convention on Negotiable Cargo Documents

Moving between platforms: One reason eBLs have spread slowly is that everyone in the transaction has had to be on the same platform. On 15 May 2025 DCSA announced the first interoperable eBL transaction between two different platforms using its standards (the PINT API). Alongside the technical interface, the framework includes a legal framework and a control tracking registry. In our view this may in time remove the need for the buyer or the bank to sit on the same platform as you; for now, ask before the transaction which platforms are actually connected.

The UN Convention on Negotiable Cargo Documents: The UN General Assembly adopted this UNCITRAL convention on 15 December 2025. Its aim is to extend the negotiability and document-of-title function, so far found only in the ocean bill of lading, to road, rail, air and multimodal carriage. It also covers negotiable cargo

documents (NCDs) in electronic form. It does not touch the rights and obligations under the contract of carriage, or liability regimes such as the Hamburg or Rotterdam Rules; it operates alongside them. Using it is optional.

The convention was opened for signature in Accra, Ghana, in October 2026; according to the Ghana News Agency, 26 countries signed on the first day. We could not confirm from official sources how many ratifications it needs to enter into force, or whether Türkiye has signed. Until it enters into force and Türkiye ratifies it, it provides no basis for transactions governed by Turkish law.

Other digital documents

Document	Mode	Status
e-AWB	Air	See **Air cargo: the AWB and chargeable weight**.
e-CMR	Road	Türkiye acceded to the Additional Protocol on **31 January 2018**; it entered into force for Türkiye on **1 May 2018**. Technical meetings were held with Azerbaijan on a pilot project (Baku, June 2025; Ankara, March 2026). As of March 2026 no pilot shipment had been reported.
eFTI	All modes within the EU	Regulation (EU) 2020/1056 applies in full from **9 July 2027**. Member state authorities will have to accept transport information shared through certified eFTI platforms. The Commission's page does not mention an obligation on businesses to go electronic; the obligation concerns acceptance by authorities.
NCTS Phase 5	Customs transit	According to secondary sources, Türkiye's move to Phase 5 was planned for **17 November 2024**. See **Türkiye's trade and customs systems: BİLGE, NCTS, Single Window and more**.

For the legal differences between the documents, see **Transport documents compared: bill of lading, sea waybill, AWB, CMR and CIM**.

What should you do today?

eBLs will take time to become the norm. Meanwhile, there are ways that work today to cut the delays paper bills cause:

- **If you will not sell the goods in transit and there is no letter of credit**, ask whether you really need a document of title. A **sea waybill** or **telex release** allows delivery without waiting for an original bill to arrive by courier, but the document does not represent the goods. See **The bill of lading**.
- **If the original bill will not arrive before the cargo**, read about whether the carrier will deliver against an LOI, and the risks, in **Delivery without the original bill of lading: LOIs and bank guarantees**.
- **If a line or forwarder offers an eBL**, ask:
  - Which platform is used, and is it approved or deemed approved on the IG list?
  - Which law governs the eBL? English law, or a law based on MLETR?
  - Are the consignee, the notify party and any banks on the same platform, or can they join it?
  - Can the eBL be converted to paper if needed?
- **If you trade under a letter of credit**, confirm with your bank before the transaction whether it accepts eBLs and whether the credit terms allow them. For credit terms, see **Payment methods and letters of credit**.

- **Under Turkish law**, remember there is no clear statutory framework for electronic transfer and possession. Make the governing law and the platform rules clear in the contract.
- **For e-CMR**, check with your carrier and whether the destination country accepts it.

Test yourself

1. What is the main obstacle to digitising the paper bill of lading? *(Answer: It is legal rather than technical: the bill is a document of title, and that status rests on physical possession. With a file that can be copied, you cannot tell which copy is the original or who holds it.)*
2. Which MLETR concept is the equivalent of possession? *(Answer: Control: a reliable method establishes a person's exclusive control of the record and identifies that person.)*
3. Under the DCSA carriers' 2023 pledge, by when will all original bills of lading be eBLs? *(Answer: By 2030. The 50% target is "within five years", not "by 2025".)*

Frequently asked questions

Is an electronic bill of lading valid in Türkiye?

Partly. According to the legal literature, Article 1526(2) of the Turkish Commercial Code provides a basis for issuing and signing a bill of lading electronically. But there is no comprehensive framework, as in MLETR, for possession through 'control' or for electronic transfer, and Türkiye is not on UNCITRAL's MLETR list. Check the wording of the article on mevzuat.gov.tr and make the governing law clear in the contract.

Did the DCSA carriers promise 50% eBLs by 2025?

No, that is a common mistake. The pledge the nine DCSA member carriers announced on 15 February 2023 is to move 50% of original bills of lading to eBLs based on DCSA standards within five years, and 100% by 2030.

Which eBL systems are safe from a P&I insurance point of view?

Under P&I club rules, cargo liabilities arising from paperless systems are covered if the system is approved by the International Group of P&I Clubs. The IG's current list has 15 approved and 6 'deemed approved' systems; Bolero, CargoX, ICE CargoDocs (formerly essDOCS), IQAX eBL and WAVEBL are among them.

Is e-CMR used in Türkiye?

Türkiye acceded to the e-CMR Additional Protocol on 31 January 2018, and it entered into force for Türkiye on 1 May 2018. A pilot project with Azerbaijan is being prepared; as of March 2026 no pilot shipment had been reported. For routine use, check with your carrier and whether the destination country accepts it.

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