



Enabling digital trade through legal reform

**A guide for policymakers
and practitioners**

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Contents

- Introduction 4
- 1. What is the Model Law on Electronic Transferable Records (MLETR)? 5
- 2. Why MLETR matters for trade and the economy 7
- 3. Core legal concepts behind MLETR 9
- 4. Global developments and lessons 11
- 5. Practical considerations for governments and stakeholders 13
- 6. A pathway to MLETR alignment 15
- 7. Implementing MLETR in practice 19
- 8. Tools and resources 23



Introduction

What is the purpose of this guide?

This guide is a general introduction to the United Nations Commission on International Trade Law (UNCITRAL) Model Law on Electronic Transferable Records (MLETR).

It explains why legal reform is foundational to digital trade, clarifies the core legal concepts behind electronic transferable records (ETRs), addresses common concerns raised by governments and market participants and provides a practical pathway for aligning with and implementing MLETR.

Who is this guide for?

This guide is intended for policymakers and officials working in trade, finance, digitalisation and/or the digital economy. It is also relevant for anyone interested in MLETR or the future of digital trade ecosystems.

How is this guide structured?

This guide is designed for quick reading and easy reference. Readers do not need to read it sequentially and may consult individual sections depending on their interests.

- **Section 1** introduces MLETR and explains how ETRs can replicate the legal functions of paper trade documents.
- **Section 2** explains why MLETR matters for trade and the economy, including the limitations of paper-based trade documentation and the potential benefits of digitalisation.
- **Section 3** outlines the core legal concepts underlying MLETR, including functional equivalence and the principles that ensure the reliability of ETRs.
- **Section 4** provides an overview of global developments and experiences of selected jurisdictions in adopting or aligning with MLETR.
- **Section 5** discusses the practical implications of ETRs for governments, businesses and market participants and addresses frequently asked questions about MLETR.
- **Section 6** outlines possible pathways for legal reform, including typical stages of MLETR alignment and a readiness checklist for policymakers.
- **Section 7** focuses on practical implementation issues, including engaging with industry, evaluating ETR systems and approaches to scaling digital trade adoption.
- **Section 8** presents practical tools and resources, including international initiatives, legal materials, implementation toolkits and institutional support for MLETR.

1. What is the Model Law on Electronic Transferable Records (MLETR)?

1.1 MLETR at a glance

The Model Law on Electronic Transferable Records (MLETR), adopted in 2017 by the United Nations Commission on International Trade Law (UNCITRAL)¹, provides a legal framework to enable certain trade and finance documents to be issued and transferred electronically while maintaining the same legal effect as their paper counterparts.

Many of the documents used in international trade belong to a category known as transferable documents. Transferable documents are instruments that embody rights which can be transferred from one party to another through possession of the document. In practice, the holder of the document is considered to hold the rights associated with it. For example, the right to claim goods, receive payment or enforce a financial obligation.

This characteristic distinguishes transferable documents from other commercial documents, such as invoices or certificates, which may provide information or evidence but do not transfer rights simply through possession.



Examples of transferable documents covered under MLETR

- Bills of lading
- Bills of exchange
- Warehouse receipts
- Insurance certificates
- Cheques
- Promissory notes
- Consignment notes
- Airway bills

Traditionally, the transfer of rights in these instruments has depended on the physical possession of the paper document. In many jurisdictions, such documents must still exist in paper form to be legally transferred or enforced, creating a significant barrier to the digitalisation of trade processes.

MLETR addresses this challenge by establishing rules that allow electronic records to perform the same legal functions as paper documents. In doing so, MLETR provides a legal foundation that can support the transition toward paperless trade.

1 United Nations Commission on International Trade Law (UNCITRAL). [About UNCITRAL](#).



Three key principles under MLETR

- Non-discrimination against the use of electronic means
- Functional equivalence between paper and electronic records
- Technology neutrality allowing different technological solutions to be used

1.2 What are electronic transferable records?

MLETR allows transferable documents to exist in electronic form, known as electronic transferable records (ETRs). An ETR is the electronic equivalent of a transferable document used in trade or finance. Under MLETR, an electronic record can perform the same legal functions as its paper counterpart, provided that certain reliability requirements are met.



Core requirements for electronic transferable records

- The electronic record must be clearly identifiable as the transferable record.
- The record must be capable of being subject to exclusive control.
- The integrity of the record must be maintained throughout its lifecycle.

By enabling transferable documents to exist in electronic form, ETRs allow trade and finance transactions to be conducted more quickly and securely while reducing reliance on paper documentation.

1.3 How MLETR relates to existing e-commerce and e-transactions laws

More than 180 jurisdictions already recognise electronic communications and electronic signatures in commercial transactions², often under e-commerce or e-transactions laws. These frameworks enable businesses and governments to use electronic documents, contracts and signatures across a wide range of commercial activities.

However, most of these laws do not extend to transferable documents used in cross-border trade and trade finance. Legal frameworks governing instruments, such as bills of lading or bills of exchange, traditionally rely on concepts, such as the physical possession of an original document, which are difficult to replicate in a digital environment.

MLETR was developed to address this gap. Rather than replacing existing e-commerce legislation, it complements it by establishing rules that allow certain transferable documents and instruments to exist and operate in electronic form while preserving the same legal effect as their paper counterparts.

2 TurboDocx. [Are Electronic Signatures Legal? Complete Guide by Country.](#)

2. Why MLETR matters for trade and the economy

2.1 Problems with paper-based trade documents

Globally, around four billion paper trade documents are processed each year³, and a typical cross-border trade transaction could involve the exchange of over 30 different trade documents or over 240 copies⁴. Many of these documents must be issued, transferred and presented in physical form, involving multiple parties including exporters, importers, banks, shipping companies and customs authorities.

This reliance on paper documentation creates delays and increases costs as documents often need to be printed, couriered and manually verified at different stages of a transaction. Paper documentation can expose supply chains to risks such as document loss, fraud and processing errors, while slowing the movement of goods and finance across borders.

2.2 Economic and trade benefits of trade digitalisation

Trade digitalisation can improve the efficiency of cross-border transactions. By enabling key trade documents to be issued, transferred and verified electronically, the use of ETRs (**see section 1.2**) reduces delays and allows information to move instantly between exporters, importers, financial institutions, logistics providers and regulators.

Macroeconomic gains from lower trade costs

These efficiency gains can translate into substantial economic benefits. Analysis⁵ by the Economic and Social Commission for Asia and the Pacific (ESCAP) suggests that the implementation of digital trade facilitation and paperless trade measures could lead to:

- Around 8% reduction in global trade costs
- An increase of approximately \$900 billion in global exports
- Real wage growth of about 3%
- A reduction in producer prices of nearly 4%

Other studies have also examined the economic benefits of digitalising trade documentation, including regional analyses covering Commonwealth countries⁶ and national-level assessments of electronic trade documentation reforms⁷.

3 International Chamber of Commerce United Kingdom (ICCUK). [United Kingdom: Creating a Modern Digital Trade Ecosystem – Cutting the Cost and Complexity of Trade](#).

4 International Chamber of Commerce (ICC). [Standards Toolkit for Cross-border Paperless Trade](#).

5 UN.ESCAP, Duval, Y., Utoktham, C., et. al. (2025) [Impact of trade digitalization on trade, wages and producer prices: global, regional and national estimates](#).

6 Commonwealth Secretariat. (2022). [Quantitative Analysis of the Move to Paperless Trade](#)

7 Government of the United Kingdom. (2022). [Impact Assessment of the Electronic Trade Documents Bill](#).

Greater impact for developing and smaller economies

The benefits of trade digitalisation could be particularly significant for developing and smaller economies, where trade costs tend to be higher and paper-based processes remain more prevalent. ESCAP–World Bank data show that, in 2010, average manufacturing trade costs were about 82% in high-income countries, compared with 227% in low-income countries, nearly three times higher⁸.

ESCAP analysis further suggests that digital trade facilitation measures could reduce trade costs by more than 15% in many developing countries⁹, with particularly strong export growth projected in:

- Sub-Saharan Africa: ~ 80% rise in exports
- Pacific Islands: over 100% rise in exports

More inclusive participation in international trade

Digital trade can also support more inclusive participation in international trade. In many economies, small- and medium-sized enterprises (SMEs) account for the majority of businesses but remain underrepresented in cross-border trade. For example, in the Association of Southeast Asian Nations (ASEAN), SMEs make up about 97% of the private sector, yet account for only 10–30% of exports¹⁰. By reducing frictions in trade processes and simplifying trade documentation, digitalisation can help create a more accessible trading environment for smaller firms.

Moreover, digitalising trade can also improve SME access to trade finance by creating transparent and standardised transaction data. This can be used to evidence the credit worthiness of an enterprise, particularly where traditional collateral is limited which is often the case with SMEs.

Lastly, simplifying trade procedures through harmonisation can enable SMEs to connect more easily with international partners and integrate into global supply chains.

8 World Trade Organization (WTO) and World Bank. (2015). Aid for Trade at a Glance: Reducing Trade Costs for Inclusive, Sustainable Growth, Chapter 2.

9 United Nations ESCAP (2025)

10 Mar, P. (2026). “What Can Trade Digitalisation Do for SMEs?”. Trade Finance Global, 26 February

3. Core legal concepts behind MLETR

3.1 Functional equivalence: writing, signature and original

A key principle underpinning MLETR is functional equivalence. This means that electronic records can satisfy legal requirements traditionally associated with paper documents.

Many laws require documents to be in writing, contain a signature or exist as an original document. For example, the United Kingdom's Bills of Exchange Act 1882 defines a bill of exchange as an order "in writing" that is "signed" by the person giving it¹¹. Similar requirements appear in the United States Uniform Commercial Code¹². These concepts were developed in a paper-based environment, where physical documents served as evidence of agreements and obligations.

MLETR allows these legal requirements to be satisfied in a digital environment through functional equivalence:

- **Writing** – The information in the electronic record is accessible and usable for future reference.
- **Signature** – An electronic method identifies the party involved and indicates their intention regarding the content of the record.
- **Original** – The electronic record represents a single authoritative record whose integrity is preserved.

3.2 Singularity, control and integrity

In paper-based systems, transferable documents typically exist as a single original document, and possession of that document determines who holds the rights associated with it.

In a digital environment, however, electronic files might be copied. To replicate the legal effect of an "original" document, MLETR introduces mechanisms that ensure an electronic transferable record remains unique, controlled and secure.

Three key concepts support this:

- **Singularity** – ensuring that there is only one authoritative electronic transferable record at any time.
- **Exclusive control** – ensuring that only one party can exercise control over the record
- **Integrity** – ensuring that the information contained in the record remains complete, with all changes traced.

3.3 Transfer, delivery and endorsement in an electronic environment

In traditional trade transactions, transferable documents can be transferred between parties by delivery or endorsement. These mechanisms allow rights embodied in the document to pass from one holder to another.

11 United Kingdom. (1882). [Bills of Exchange Act](#).

12 Law of Commercial Transactions, [Section 22.3: Requirements for Negotiability](#).

MLETR enables these processes to take place electronically.

Instead of physically handing over a document, the transfer of rights occurs through the transfer of control over the ETR. When control of the record moves from one party to another, the legal effect is similar to the delivery of a paper document.

Electronic systems can also replicate functions such as endorsement, allowing rights to be transferred or assigned between parties in a secure digital environment.

This approach ensures that existing commercial practices in trade and trade finance can continue to operate even when documentation becomes electronic.

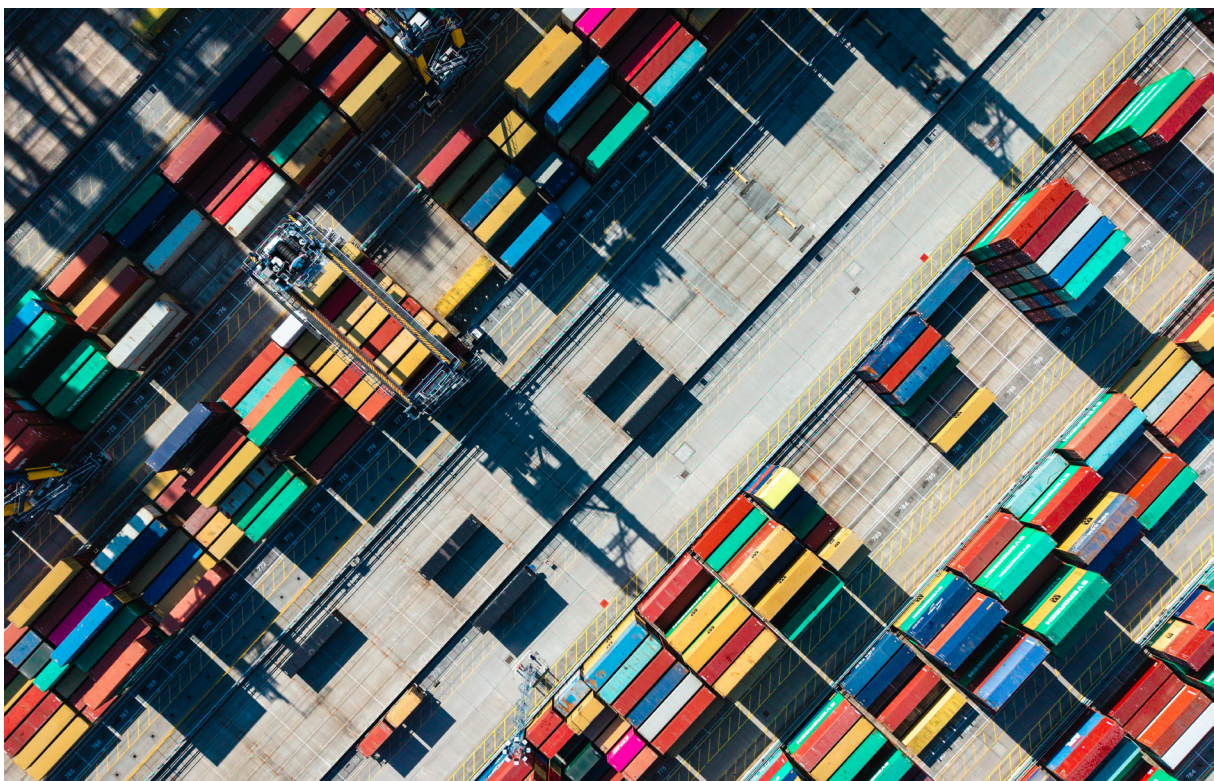
3.4 Technology-neutral and model-neutral approach

MLETR adopts a technology-neutral approach, meaning that it does not require the use of any specific technology or platform for ETRs.

Instead, the law focuses on whether the method used is reliable in fulfilling the legal requirements. This allows different technological solutions to be used, including registry-based systems, distributed ledger technologies or other digital platforms.

MLETR is also model-neutral, meaning that it does not prescribe a particular business or operational model for managing ETRs.

This flexibility encourages innovation while ensuring that legal rules remain relevant as technology evolves. It also allows governments and industry participants to adopt solutions that best fit their technological infrastructure and market needs.



4. Global developments and lessons

4.1 Global overview of MLETR adoption and alignment

A number of jurisdictions have already adopted legislation that formally implements or aligns with the principles of MLETR.

UNCITRAL maintains an official list of these jurisdictions on its website, providing the most up-to-date information on where legislation has been enacted.¹³

Jurisdictions may pursue different pathways to align their legal frameworks with the principles reflected in MLETR. Some adopt legislation closely based on MLETR, while others introduce reforms through amendments to existing commercial or electronic transactions legislation. In federal systems, such as the United States and Canada, legal alignment may occur at the state or provincial level rather than through a single national law. In other cases, reforms may initially focus on specific trade documents, such as electronic bills of lading (eBLs), enabling digital trade transactions even where broader legislative alignment has not yet taken place.



UNCITRAL MLETR Adoption List and MLETR Tracker

Resource	What it shows
UNCITRAL MLETR Adoption List	Official list of jurisdictions whose legislation has formally adopted or aligned with the principles of MLETR
MLETR Tracker	Monitoring tool that tracks jurisdictions exploring, developing or implementing reforms related to ETRs ¹⁴

4.2 Selected jurisdiction experiences

Abu Dhabi Global Market

Abu Dhabi Global Market (ADGM) incorporated MLETR into its Electronic Transactions Regulations 2021. The framework enables the use of electronic transferable records within the financial centre’s trade finance and digital services ecosystem.

Belize

Belize launched its National Digital Agenda in 2022 to guide the country’s transition toward digital government and a digital economy. The strategy is supported by a package of electronic transaction and data laws aligned with international frameworks, including principles reflected in MLETR.

Paraguay

Paraguay incorporated many provisions of MLETR into its Law on Trust Services, which entered into force in 2022. The law establishes a framework for electronic transferable records supported by technical standards issued by the national implementation authority.

¹³ United Nations Commission on International Trade Law (UNCITRAL). (2017). Model Law on Electronic Transferable Records (MLETR).

¹⁴ United Nations ESCAP. MLETR Tracker | Cross-Border Paperless Trade Database

5. Practical considerations for governments and stakeholders

5.1 Implications for governments and regulators

Adopting legal frameworks that recognise ETRs can affect how governments supervise, process and coordinate trade-related activities. For regulators and public authorities, ETRs introduce new opportunities for improving regulatory oversight, inter-agency cooperation and digital government initiatives.

Enhanced transparency and auditability

Electronic records create clearer and more reliable audit trails than paper documents. This can improve the ability of authorities to trace transactions across supply chains and strengthen oversight in areas such as customs control, trade compliance and fraud detection.

Improved coordination across government agencies

Trade processes typically involve multiple authorities, including customs administrations, port authorities, financial regulators and trade ministries. Electronic documentation can facilitate data exchange between these institutions and support more coordinated regulatory processes.

More efficient regulatory procedures

ETRs can simplify document verification and reduce reliance on physical document handling. This can help authorities process documentation more efficiently while maintaining regulatory controls.

Support for digital government and trade modernisation

Legal recognition of ETRs can complement broader digital government and digital economy strategies. By enabling digital trade documentation, governments can modernise trade-related administrative systems and align national frameworks with international paperless trade initiatives.

5.2 Implications for businesses and market participants

The legal recognition of ETRs can change how businesses manage trade documentation and interact with partners across the trade ecosystem. For exporters, importers, financial institutions and logistics providers, ETRs introduce new ways of handling trade documents, coordinating transactions and accessing trade finance.

Faster transactions and reduced delays

ETRs can be issued, transferred and presented instantly, reducing the time needed for document exchange and verification. In practice, an eBL solution reduced amendment times from over a week to under 24 hours¹⁵, while digitalised documentary collections shortened transaction times from around 15 days to less than 24 hours¹⁶.

¹⁵ BHP. [Key Trade Documents and Data Elements on the Frontlines](#).

¹⁶ Lloyds Bank. [Key Trade Documents and Data Elements on the Frontlines](#).

Lower documentation and administrative costs

Digital documentation reduces reliance on printing, storage and courier services while simplifying document preparation and verification. For example, freight forwarders using the FIATA Electronic Bill of Lading have reported drafting time and cost reductions of around 70%¹⁷.

More efficient trade finance processes

Banks and financial institutions rely heavily on trade documents to assess and process financing transactions. ETRs can reduce discrepancies in documentation, accelerate document verification and enable faster access to trade finance.

Improved supply chain coordination

Digital records can be transmitted and accessed by multiple authorised parties across the supply chain, including exporters, importers, carriers, logistics providers and insurers. This improves information flow, reduces errors caused by manual data entry and supports more efficient coordination of logistics and trade operations.

5.3 Frequently asked questions on MLETR

Why is government leadership important for the adoption of electronic trade documents?

Government leadership is important because legal reform is often required to recognise trade documents in electronic form. Business surveys indicate that legal recognition remains a key barrier to adoption. For example, the FIT Alliance 2024 survey found that 43% of respondents cited concerns about legal acceptance as a barrier to adopting eBLs¹⁸.

Must MLETR be implemented for all transferable documents?

In principle, jurisdictions may apply the framework to all transferable documents or begin by enabling electronic form for one or more specific instruments. While a phased approach may be adopted in practice, broader implementation can provide greater legal certainty and help support wider adoption of ETRs.

Does legislation need to list the documents covered by MLETR?

MLETR does not require legislation to explicitly identify the documents to which it applies. Some jurisdictions have nevertheless chosen to list specific instruments to provide additional legal clarity.

Can ETRs be used even if MLETR has not been adopted domestically?

In some cases, ETRs may still be used through private contractual frameworks, where participating parties agree to platform rules or choose the law of a jurisdiction that recognises such records. However, these arrangements typically apply only to parties within the contractual network. By contrast, adopting MLETR through public law provides broader legal recognition across the market, enabling ETRs to be used more widely and supporting greater scalability.

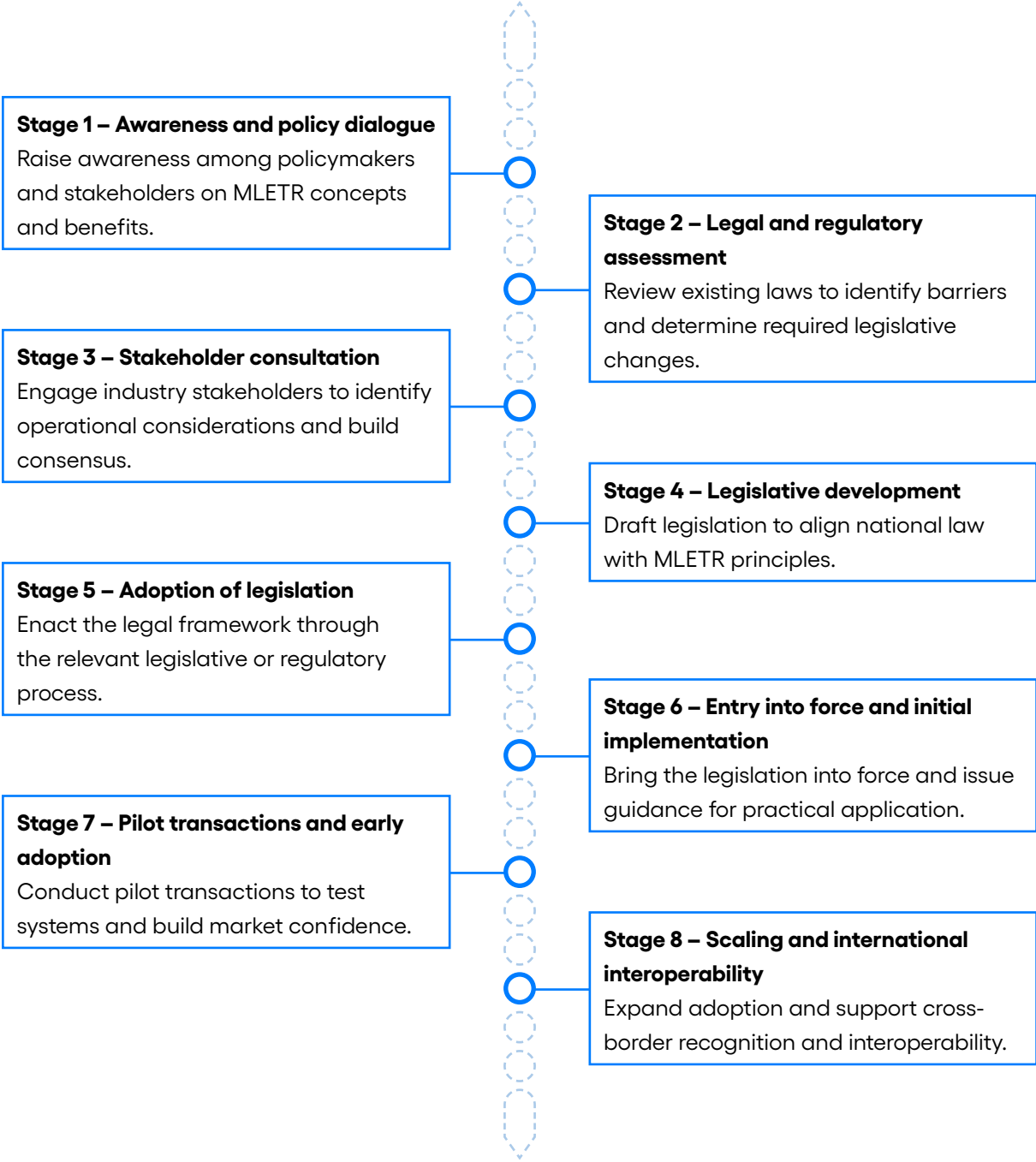
¹⁷ CargoX. [Key Trade Documents and Data Elements on the Frontlines](#).

¹⁸ Future International Trade (FIT) Alliance. [eBL Report](#).

6. A pathway to MLETR alignment

6.1 Typical stages of MLETR legal reform

Experience from jurisdictions that have adopted or aligned with MLETR suggests that legal reform typically follows a series of stages, although timelines and approaches may vary.





Legislative approaches to aligning with MLETR

In practice, two main legislative approaches are commonly used when aligning with MLETR:

- 1. Stand-alone legislation** – introducing a dedicated law recognising ETRs (for example, the United Kingdom’s Electronic Trade Documents Act 2023).
- 2. Amendments to existing legislation** – incorporating MLETR principles into existing electronic transactions or commercial laws (for example, Singapore’s amendments to its Electronic Transactions Act).



How long does legal reform usually take?

Experience from different jurisdictions suggests that the reform process can vary widely. For example, the United Kingdom’s reform process took around three years, while Belize completed the process in about one year. In many jurisdictions, legal reform can often be completed in around 18 months, depending on legislative procedures and institutional arrangements.

6.2 MLETR readiness checklist for policymakers

Before beginning legislative reform or implementation efforts, policymakers may find it useful to conduct a structured readiness assessment. Building on the reform stages outlined in [Section 6.1](#), the checklist below highlights practical areas that governments typically review when considering alignment with MLETR.

i. Legal framework

A review of the existing legal framework helps identify provisions that may need to be amended to enable the electronic issuance, transfer and enforcement of transferable records.

Task	Goal
<input type="radio"/> Review existing legislation governing trade documents and commercial instruments	<input type="radio"/> Identify whether current laws require certain documents to exist in paper form
<input type="radio"/> Assess existing electronic transactions or e-commerce legislation	<input type="radio"/> Determine whether current frameworks already recognise electronic records and signatures
<input type="radio"/> Identify legal barriers affecting transferable documents (for example, bills of lading, bills of exchange)	<input type="radio"/> Clarify which provisions prevent the use of electronic transferable records
<input type="radio"/> Determine legislative options (stand-alone law or amendments to existing acts)	<input type="radio"/> Establish a clear legal pathway for aligning domestic law with MLETR

ii. Institutional coordination

Effective institutional coordination is needed to ensure that legal reform and implementation efforts are aligned across government.

Task	Goal
<input type="radio"/> Identify the lead ministry or authority responsible for digital trade documentation reform	<input type="radio"/> Ensure clear government leadership for the reform process
<input type="radio"/> Map relevant government agencies involved in trade documentation (trade, finance, justice, customs, transport, digital economy)	<input type="radio"/> Establish coordination across institutions responsible for trade regulation
<input type="radio"/> Establish an inter-agency working group on electronic trade documents	<input type="radio"/> Facilitate policy coordination and information sharing
<input type="radio"/> Define regulatory oversight roles for digital trade systems	<input type="radio"/> Clarify responsibilities for supervision and implementation

iii. Stakeholder engagement

Engagement with industry stakeholders helps ensure that legal reform reflects practical trade processes and market needs.

Task	Goal
<input type="radio"/> Identify key private-sector stakeholders involved in trade documentation	<input type="radio"/> Ensure industry participation in policy development
<input type="radio"/> Conduct consultations with banks, logistics providers, exporters, insurers and shipping companies	<input type="radio"/> Identify practical operational issues affecting electronic trade documents
<input type="radio"/> Engage technology providers and digital trade platforms	<input type="radio"/> Understand technical solutions supporting ETRs
<input type="radio"/> Establish public-private dialogue mechanisms or advisory groups	<input type="radio"/> Build confidence and support for digital trade reforms

iv. Implementation capacity

Assessing implementation capacity helps ensure that supporting infrastructure, institutions and pilot initiatives are in place for effective adoption of ETRs.

Task	Goal
<input type="radio"/> Assess availability of supporting digital infrastructure (digital identity, electronic signatures, trust services)	<input type="radio"/> Ensure enabling infrastructure for ETRs
<input type="radio"/> Evaluate awareness and capacity among regulators, courts and legal professionals	<input type="radio"/> Identify training or capacity-building needs

Task	Goal
<input type="checkbox"/> Consider pilot projects or phased implementation approaches	<input type="checkbox"/> Test electronic transferable record systems before large-scale deployment
<input type="checkbox"/> Review existing digital trade or paperless trade initiatives	<input type="checkbox"/> Align MLETR implementation with broader digital trade strategies



7. Implementing MLETR in practice

7.1 Engaging industry and digital trade ecosystem partners

Once a legal framework recognising ETRs is in place, effective implementation depends on continued collaboration between governments, industry participants and technology providers across the digital trade ecosystem. Banks, shipping lines, exporters, importers, logistics providers and digital platform operators are directly involved in issuing, transferring, financing or verifying trade documents. Close engagement with these actors helps ensure that ETR systems can be integrated into existing trade, logistics and trade finance processes.

Governments may also work with technology providers and digital trade infrastructure initiatives that support the issuance, transfer and verification of ETRs. Such collaboration helps ensure that digital solutions align with the legal requirements established under MLETR and can be integrated into existing trade and logistics systems.



TradeTrust

TradeTrust is a framework developed by Singapore's Infocomm Media Development Authority (IMDA) to enable the trusted exchange of electronic trade documents across digital platforms. It is built on OpenAttestation, an open-source technology that allows digital documents to be cryptographically verified and independently authenticated. OpenAttestation has been recognised as a digital public good by the Digital Public Goods Alliance.

The framework includes a title transfer feature designed to support compliance with MLETR, enabling the transfer of rights through ETRs. Technical guidance for implementing TradeTrust is available on the TradeTrust website.¹⁹

7.2 Evaluating ETR systems and technology solutions

Under MLETR, ETRs must be managed using a reliable method that ensures the integrity of the record and the exclusive control of the holder. In practice, digital platforms used to issue and transfer ETRs must demonstrate that they meet certain legal, technical and governance requirements.

To support this process, industry initiatives have developed assessment tools. One example is the Reliability Assessment Framework developed by the ICC Digital Standards Initiative in collaboration with the Digital Governance Council of Canada²⁰. The framework provides a structured approach for evaluating whether ETR systems meet the reliability requirements under MLETR.

¹⁹ Further information is available on [What Is TradeTrust](#)

²⁰ Further information is available in [ICC DSI launches digital trade reliability assessment tool - ICC - International Chamber of Commerce](#)

The framework assesses issues such as

- integrity of electronic records
- mechanisms for exclusive control
- authentication and identity verification
- system security and auditability

Technology providers may conduct self-assessments and, where applicable, obtain verification statements to demonstrate compliance. Such frameworks provide common benchmarks that help regulators, industry participants and technology providers evaluate digital trade document systems and support the trusted use of ETRs.



Key questions for assessing ETR solutions

- Does the solution support the legal concepts required under MLETR, including singularity, integrity and exclusive control of the electronic record?
- Can the system demonstrate that only one authoritative ETR exists at any given time and allow the transfer of control between parties in a manner equivalent to delivery or endorsement of a paper document?
- What mechanisms ensure the integrity and authenticity of electronic records, including identity verification of participants and audit trails for tracking the lifecycle of the record?
- Can the system interact with other digital trade platforms and support internationally recognised data and document standards?
- What cybersecurity safeguards are in place to prevent duplication, fraud or unauthorised access and how are risks managed in the event of system failure or data loss?
- Can the solution be integrated with existing trade finance, logistics or customs systems and are the operational requirements manageable for businesses, including SMEs?

7.3 Pilots and phased implementation

When implementing ETRs, governments and industry stakeholders may begin with gradual implementation rather than immediate large-scale deployment. New legal and technological arrangements can first be tested in controlled environments before expanding their use across the trade ecosystem.

Pilot initiatives allow governments and market participants to test ETR systems in real trade transactions. These pilots help identify operational challenges, assess the reliability of digital platforms and demonstrate how electronic trade documents can function within existing trade, logistics and trade finance processes.

Governments may also adopt a phased implementation approach. This may involve initially focusing on specific trade documents, such as bills of lading, or particular sectors or trade corridors before expanding the use of ETRs more broadly. Such an approach allows stakeholders to gain experience and build confidence before wider adoption.

7.4 Monitoring and evaluation

After implementation, governments may monitor how ETRs are used in practice and evaluate the effectiveness of the legal framework. This helps policymakers assess whether legal reform is translating into broader digitalisation of trade processes.

Monitoring activities may include:

- assessing the adoption of ETRs by businesses, financial institutions and other trade participants
- identifying operational challenges encountered by users
- reviewing interoperability between digital trade platforms and systems
- tracking indicators such as reductions in processing time, administrative costs and paper-based documentation

Periodic review of the legal and regulatory framework can help ensure that it remains responsive to technological developments, evolving trade practices and the continued growth of digital trade ecosystems.

7.5 Broader implementation issues

What role do customs and single window systems play in MLETR implementation?

MLETR primarily addresses private-law aspects of transferable documents. However, integration with customs processes and trade single window systems can support the broader digitalisation of trade documentation and facilitate end-to-end paperless trade.

How does MLETR relate to digital identity?

Digital identity frameworks can support the authentication of parties involved in issuing, transferring and receiving electronic transferable records. While MLETR does not require a specific digital identity system, trusted identification mechanisms can help strengthen confidence in digital trade transactions.

Should governments mandate interoperable document standards?

MLETR adopts a technology-neutral approach and does not prescribe specific technical standards. Nevertheless, governments may encourage the use of interoperable document and data standards to facilitate cross-platform exchange of ETRs and support international interoperability.

Does the government need to maintain a registry of reliable systems or trust services?

MLETR does not require governments to maintain a registry of approved systems; instead it simply states that ETRs be transferred using a reliable method that ensures integrity and exclusive control. In practice, reliability may be assessed through technical standards, industry frameworks, or market-based solutions.

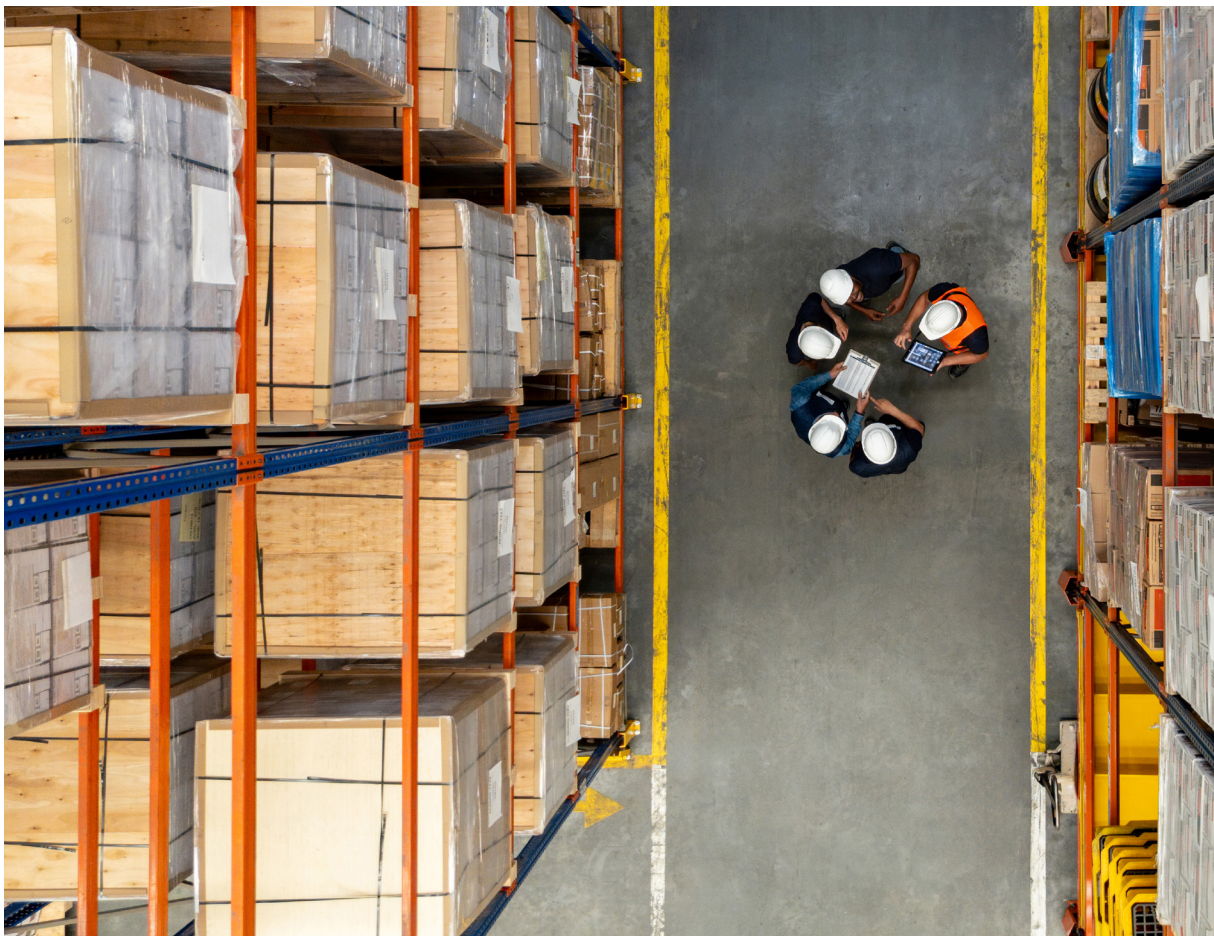
How can the government ensure that MLETR alignment drives digital transformation of trade?

Legal reform alone may not automatically lead to widespread adoption. Governments may complement MLETR alignment with policy measures such as industry engagement, pilot initiatives, capacity-building programmes and support for interoperable digital trade infrastructure.

How does MLETR relate to the Negotiable Cargo Documents (NCD) Convention?²¹

MLETR is a general model law enabling the use of ETRs across sectors. By contrast, the NCD Convention is a binding international treaty that establishes uniform rules specifically for negotiable cargo documents, including their issuance, transfer and legal effects across all modes of transport. Its provisions on electronic negotiable cargo documents are aligned with MLETR.

21 Further information is available on [United Nations Convention on Negotiable Cargo Documents](#)



8. Tools and resources

8.1 International initiatives supporting digital trade

Legal frameworks enabling ETRs are closely connected to broader international initiatives that promote digital trade facilitation and paperless trade. These initiatives support the development of interoperable digital trade systems, simplified trade procedures and cross-border recognition of electronic trade documents.

Several global, regional and bilateral initiatives complement the objectives of MLETR by promoting digital trade infrastructure, regulatory cooperation and electronic documentation frameworks.

Level	Initiative	Focus
Global	WTO Trade Facilitation Agreement (TFA) ²²	Promotes electronic submission and harmonisation of border/customs procedures
	WTO Joint Statement Initiative on Electronic Commerce ²³	Negotiates international rules to support digital trade and electronic transactions
	G7 Digital and Technology Ministerial Declaration (2021) ²⁴	Encourages the development of legal frameworks compatible with ETRs
Regional	ESCAP Framework Agreement on Cross-Border Paperless Trade in Asia and the Pacific ²⁵	Promotes regional cooperation to enable the cross-border exchange and legal recognition of electronic trade documents
	ASEAN Digital Economy Framework Agreement (DEFA) ²⁶	Establishes a regional framework to support digital economy cooperation and digital trade within the Association of Southeast Asian Nations (ASEAN)

²² Further information is available on [WTO Trade Facilitation Agreement \(TFA\)](#)

²³ Further information is available on [WTO Joint Statement Initiative on Electronic Commerce](#)

²⁴ Further information is available on [G7 Digital and Technology - Ministerial Declaration - GOV.UK](#)

²⁵ Further information is available on [ESCAP Framework Agreement on Cross-Border Paperless Trade in Asia and the Pacific](#)

²⁶ Further information is available on [ASEAN Digital Economy Framework Agreement \(DEFA\)](#)

Level	Initiative	Focus
Digital economy agreements	Digital Economy Partnership Agreement (DEPA) ²⁷	Includes provisions supporting digital trade facilitation and electronic trade documentation
	Singapore–Australia Digital Economy Agreement ²⁸	Bilateral agreement supporting digital trade, data flows and paperless trade processes
	UK–Singapore Digital Economy Agreement ²⁹	Establishes rules supporting digital trade, electronic transactions and cross-border digital cooperation

8.2 Official UNCITRAL legal resources

For policymakers, legal drafters and regulators seeking the official legal reference, the primary source is MLETR³⁰, adopted in 2017. The most important accompanying resource is the Explanatory Note to MLETR³¹, which explains the objectives of the Model Law, clarifies its key legal concepts and provides article-by-article commentary on how its provisions may be interpreted and implemented.

8.3 Implementation toolkits and learning resources

A number of tools and learning resources support policymakers and practitioners in understanding and implementing MLETR. These resources provide guidance on legal readiness, global adoption trends and practical implementation of ETRs.

Resource	What it provides
ESCAP, UNCITRAL, EIF Legal Readiness Assessment Guide ³²	Online assessment tool helping governments evaluate legal and regulatory readiness for cross-border paperless trade, including frameworks relevant to MLETR adoption.
ICC Academy MLETR Foundations ³³	Introductory training programme explaining the legal principles of MLETR and its role in enabling ETRs and trade finance.
WTO Cross-border Paperless Trade Toolkit ³⁴	Practical guidance and policy resources supporting governments in implementing paperless trade measures and cross-border digital trade processes.

²⁷ Further information is available on [Digital Economy Partnership Agreement \(DEPA\)](#)

²⁸ Further information is available on [Singapore–Australia Digital Economy Agreement](#)

²⁹ Further information is available on [UK–Singapore Digital Economy Agreement](#)

³⁰ Further information is available on [UNCITRAL Model Law on Electronic Transferable Records \(2017\) | United Nations Commission on International Trade Law](#)

³¹ Further information is available on [UNCITRAL Model Law on Electronic Transferable Records](#)

³² Further information is available on [Legal Readiness Assessment Guide | Online Readiness Assessment Guide for Cross-Border Paperless Trade](#)

³³ Further information is available on [MLETR Foundations - ICC Academy](#)

³⁴ Further information is available on [WTO | Cross-border Paperless Trade Toolkit](#)

Resource	What it provides
UN/CEFACT White Paper on Transfer of MLETR-Compliant Titles ³⁵	Guidance on how ETRs, particularly eBLs, can be implemented in compliance with MLETR requirements.
ICC Digital Standards Initiative News and resources ³⁶	Collection of policy insights, research and case studies on digital trade standards, interoperability and the implementation of ETRs.

8.4 Institutional support and capacity building

Governments exploring alignment with MLETR can draw on expertise and capacity-building programmes provided by international organisations and industry initiatives. They support policymakers through legal guidance, technical assistance, training programmes and policy dialogue.

Organisation	Support programmes and expertise
UNCITRAL Secretariat	Provides legal expertise on MLETR and supports dialogue among governments on international trade law reform.
UNESCAP	Supports governments through policy dialogue, research and capacity-building programmes on cross-border paperless trade and digital trade facilitation.
ICC Digital Standards Initiative (DSI)	Works with governments and industry to promote digital trade standards, interoperability frameworks and practical implementation of ETRs.
ICC National Committees	Provide national-level engagement platforms connecting policymakers, regulators and industry stakeholders on digital trade initiatives.
Multilateral development partners	Development banks and international partners increasingly support digital trade reforms through technical assistance, pilot projects and capacity-building initiatives.

³⁵ Further information is available on [White Paper Transfer of Model Law on Electronic Transferable Records - Compliant Titles | UNECE](#)

³⁶ Further information is available on [ICC DSI | News & Resources](#)



The International Chamber of Commerce (ICC) is the institutional representative of more than 45 million companies in over 170 countries. ICC's core mission is to make business work for everyone, every day, everywhere. Through a unique mix of advocacy, solutions and standard setting, we promote international trade, responsible business conduct and a global approach to regulation, in addition to providing market-leading dispute resolution services. Our members include many of the world's leading companies, SMEs, business associations and local chambers of commerce.



The Digital Standards Initiative (DSI) aims to accelerate the development of a globally harmonised, digitised trade environment, as a key enabler of dynamic, sustainable, inclusive growth. We engage the public sector to progress regulatory and institutional reform, and mobilise the private sector on adoption, implementation and capacity building.



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