

CHALLENGES AND OPPORTUNITIES OF
DIGITALISATION
OF **INTERNATIONAL TRADE**
WHITE PAPER 2022



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OF **INTERNATIONAL TRADE**
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It is paradoxical that international B-to-B trade, which concerns professionals, is less fluid and less digitalised than B-to-C e-commerce, which allows consumers to order, be delivered, exchange or cancel their orders with complete technical and legal ease.

This White Paper, the result of a collective work conducted by ICC France between April 2021 and June 2022, looks at the many challenges faced by companies and public authorities in moving international trade processes into the digital age. It also presents the opportunities available to these different actors to make international trade formalities and documents more secure, less costly, less polluting and faster.

ICC France

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SYNTHESIS

International trade is essentially based on paper documents and manual operations to ensure the conformity of the documentary chain with the physical and financial flows of the goods involved in an international transaction. The pandemic has acted as an accelerator of digitalisation as it has forced private and public players in international trade to find new solutions to compensate for the disruption of transport and the practical impossibility of delivering a document related to transport, financing or customs.

This White Paper, produced by a transversal Task Force made up of representatives of various commissions of ICC France and fed by the feedback of numerous stakeholders, has three objectives:

- > To draw up a report on the state of digitalisation in three areas: customs, trade finance and logistics, based on an emblematic document: the maritime bill of lading;
- > Identify the main obstacles to be removed in order to accelerate the digital transformation of international trade;
- > To formulate recommendations which would help companies, professional federations, the French legislator as well as international organisations to accelerate and generalise, at a global level, a movement which has become indispensable, that of digitalisation of cross-border trade.

The state of play in terms of digitalisation shows that much progress has been made in customs formalities, particularly in the European Union with an ambitious e-customs plan.¹ On the other hand, despite the adoption of digital ICC rules and a flourishing of other initiatives at international level, trade finance operations are still largely paper-based. The international logistics sector, mainly based on maritime transport, is also hampered in its digitalisation efforts by the absence of a harmonised and secure legal framework that would recognise the equivalence between the physical and electronic version of transferable documents.

¹ See the “Multi-Annual Strategic Plan for electronic Customs (MASP-C)” section on the electronic customs website: https://ec.europa.eu/taxation_customs/customs-4/electronic-customs_en.

In order to accelerate the digitisation of international trade operations, it is necessary to remove several inherent obstacles. Thus, the authors of this White Paper recommend in particular:

- > The implementation of a management style conducive to digital transformation within organisations;
- > Adaptation of French and EU law to existing international instruments (including transposition of the UNCITRAL Model Law on Transferable Electronic Documents); and
- > The development of interoperability between digital norms and standards governing international trade.

These efforts must be led by all actors in international trade (private and public) and must be carried out at all levels: intra-company, national, regional and international.

INTRODUCTION

According to an ICC estimate, it is considered that at present the volume of paper generated by trade finance activities is of 4 billion new documents produced each year with an average exchange of 36 documents and 240 copies for only one cross-border transaction, with less than 1% of these documents being fully digitised.² However, a study carried out for the G7 under the UK presidency shows that if international trade documents were digitised, the overall gain for G7 countries would be considerable: it would result in an 84% reduction in trade costs for businesses and a 14% increase in the value of flows by 2026.³ From this observation, the digitalisation of international trade (trade finance, customs, logistics, etc.) has become nothing less than a vital need, equivalent to the competitiveness of our countries, which must be addressed as quickly as possible.

The Covid crisis of 2020 created a shock to international trade which contracted sharply forcing international mobility and many sectors of activity, such as tourism, events, catering, etc. to complete standstill. Governments of industrialised countries mobilised to support businesses and jobs. This period of crisis has also witnessed a profound change, favoured by more connected consumers and principals most anxious to improving the efficiency of their supply chains—that of a massive recourse to the digital economy: platformisation, machine learning, artificial intelligence, automation processes, digitisation of documents.

This awareness of the need to invest in high-performance tools becomes obvious in the light of a survey conducted for Orange Business Services which shows that:

- > 40% of supply chains were not sufficiently prepared to deal with the Covid-19 pandemic crisis;

2 Ganne, E. (WTO), Nguyen, H. (DSI-ICC). (2022). Standards Toolkit for Cross-border Paperless Trade. <https://iccwbo.org/publication/standards-toolkit-for-cross-border-paperless-trade/>

3 ICC United Kingdom. (2021) Creating a modern Digital Trade Ecosystem—Cutting the Cost and Complexity of Trade—Reforming laws and harmonizing legal frameworks. <https://iccwbo.uk/products/g7-creating-modern-digital-trade-ecosystem>

- > 50% of companies surveyed want to review their supply chain strategy and risk management;
- > 80% of companies say they have accelerated the digital transformation of their supply chain, which includes procurement, production, distribution and service functions.⁴

This digitalisation movement is illustrated in several ways:

- > International trade actors represented by exporters and importers, shippers, logisticians, shipowners, bankers and distributors have intensified their investments, tested new tools, launched standards and entered international “ecosystems” acting in favour of the digitalisation of international trade;
- > Six States—Bahrain, Belize, Kiribati, Papua New Guinea, Paraguay, Singapore—and the financial centre *Abu Dhabi Global Market* have incorporated the UNCITRAL Model Law on Transferable Electronic Documents (MLETR) into their national laws.⁵ The aim is to give the same legal effect to a document of title in digital format as to its equivalent in paper format. Aware of the challenge, the G7 Technology and Digital Ministers took up the issue at their meeting in April 2021 and launched a scoping exercise to identify the legislative obstacles to paperless trade.⁶ At their May 2022 meeting, the G7 Technology and Digital Ministers encouraged countries to adopt a list of principles to be included in national legislation to promote the use of transferable electronic documents (see Annex 12);
- > In September 2020, the ICC set up the Digital Standard Initiative (DSI), managed by a team based in Singapore. Its objective is to promote the transposition of the MLETR in the above-mentioned jurisdictions, but also to develop interoperability of standards between existing platforms, particularly for maritime transport, and to convince multilateral organisations of the need to encourage the digitalisation of international trade.

Aware of its importance, several ICC France members have made this subject, the digitalisation of international trade, one of their development priorities—be it in the field of efficiency research and productivity gains in trade finance activities (documentary credits, bills of exchange, international guarantees, etc.), in their relations with shippers (maritime bills of lading), or in the search for a smoother operation of supply chains that would reduce delays linked to formalities and shorten the time to market products.

4 A survey conducted for Orange Business Services by the independent research group Longitude, a Financial Times company of 320 senior executives from multinational companies in 18 countries were interviewed between August and October 2020.

5 UNCITRAL (UN). UNCITRAL Model Law on Electronic Transferable Records (2017)—State. https://uncitral.un.org/fr/texts/ecommerce/modellaw/electronic_transferable_records/status

6 G7 Technology and Digital Ministers’ Resolution, 28 April 2021.

In order to respond to the demands of its members and to support the global approach initiated by ICC, ICC France has launched the drafting of this White Paper with the aim of relaying the demands of companies and, more broadly, of all stakeholders in the ecosystem. This is done by showing the benefits of digitalisation of international trade, by identifying both discrepancies and benefits linked with already-digitised documents, as well as promoting those platforms and initiatives that seem most successful. In short, the aim is to identify the obstacles to this digitisation and to draw up concrete recommendations for companies, public authorities and international organisations.

To achieve this, a combination of means was resorted to:

- > The creation of a Task Force led by Axelle Lemaire (Member of the Board of Directors of ICC France, Deputy Director of Strategy, Transformation and Innovation at the International Red Cross, former Secretary of State for the Digital Economy and Innovation) and including representatives of companies and lawyers: BNP Paribas, Société Générale, Alstom, DS Avocats, Fiducial Legal by Lamy, CMA-CGM);
- > A methodological framework which included the elaboration of an interview guide, the input of theoretical elements and a bibliographical research. This was achieved thanks to the support of Professor Adib Bensalem of the Ecole Supérieure du Commerce Extérieur (ESCE);
- > Twenty interviews with key people representing the French administration, companies, platform providers, start-ups and international organisations were conducted between April and October 2021, and transcribed by ESCE students;
- > Access to ICC resources, in particular the DSI team around Oswald Kuyler, Hanna N'Guyen and Raoul Renard and its most involved partners, notably ICC UK (Chris Southworth, General Delegate), and ICC Germany (Oliver Wieck, General Delegate);
- > An exemplary partnership with the Paris Europlace MLETR working group launched by Philippe Henry (Managing Director, Dewenson Partners) and Béatrice Collot (Director of Leasing & Factoring, La Banque Postale) with the decisive legal contribution of Maître Dominique Doise (Cabinet Vatiér), whose objective is to move this model law into French law.

The annexes to this book, which include a bibliography and legislative texts transposing the UNCITRAL Model Law on Electronic Documents, are aimed at readers wishing to move deeper into these topics.

Once again, this work aims to fuel debate in France and in the European Union on the opportunities for developing trade by improving access to international trade finance and by productivity gains for support functions linked to the internationalisation of companies. These opportunities are

within the reach of companies through this unprecedented movement of digitalisation of international trade which needs to be accompanied and supported in order to ensure companies' competitiveness.

PART ONE

State of Play and Challenges in the Digitalisation of International Trade



Introduction⁷

The functioning of international trade is based on several overlapping flows (see Figure 1):

- > Cross-border physical flows with several means of transport, mostly maritime transport;
- > Documentary flows that allow these goods to move and pass the various controls in order to arrive at their destination; and
- > Financial flows that underpin transactions between buyers and sellers, their carriers, insurers and logisticians and secure operations through the intervention of banks.

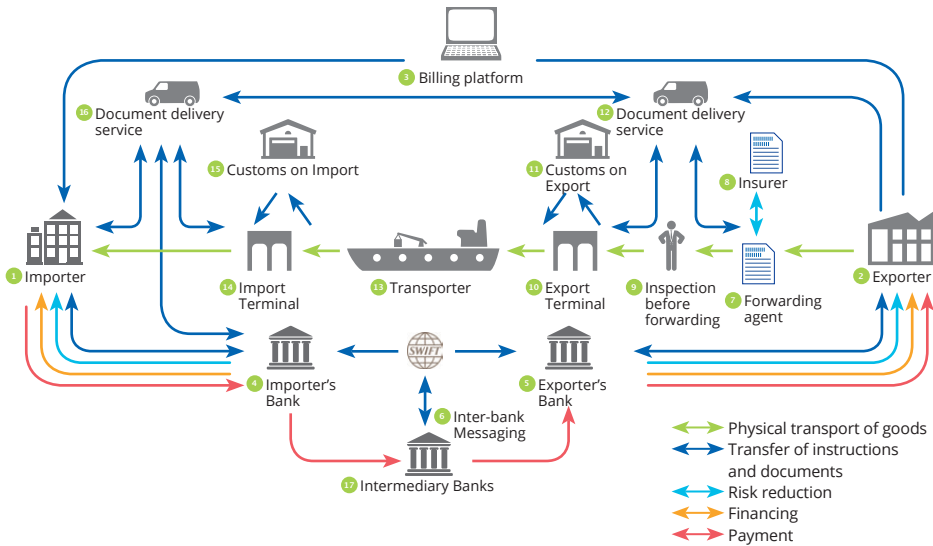


Figure 1: Trade Finance ecosystem, BCG—2015 Working Paper Embracing Digital in Trade Finance

⁷ For this part, the members of the Task Force focused on international trade in goods and the underlying operations that this trade generates in terms of customs, finance or logistics. Thus, the subject of digitalisation of international trade in services has not been addressed.

These flows obey different temporalities, are linked to numerous and varied hazards and can result in all types of situations that can modify or even delay the progress of the underlying commercial transaction. Thus, the delay in the delivery of an original bill of lading may prevent the buyer from taking possession of the goods in the ship that is in port. A digital bill of lading would not encounter such delays and the transaction would not suffer. This is a typical example that shows the value of digitising international trade: saving time and therefore competitiveness. Digitalisation would impact all international trade flows. Digitalising operations makes them more efficient, secure, sustainable, resilient and cost-effective.⁸ Indeed, electronic documents enable companies to use new technological tools—such as decentralised blockchain and smart contract technologies or machine learning programmes that automate complex tasks and increase speed. Those new technological tools will improve the conduct of international trade in terms of both security and speed.

IoT (*Internet of Things*) platforms and value-added applications such as OCR (*Optical Character Recognition*), NER (*Name Entity Recognition*), NLP (*Natural Language Processing*), time-stamped fingerprinting, are new technologies that allow:

- > Automation of all or part of key processes such as compliance (sanctions and embargoes, money laundering and CSR) and document consistency checks; and
- > A disruptive trend in back-office work with significant efficiency gains from reduced human error and significantly faster information processing.

IoT-enabled location detection technologies allow:

- > Real-time monitoring of process steps; and
- > Faster human intervention in case of malfunction.

Advanced human-machine interfaces and authentication and fraud detection tools allow:

- > The emergence of online electronic signature services on a wide variety of terminals, with the recognition of the validity of the electronic signature in many jurisdictions; and
- > Track signatures and send reminders to notify signatories.

Big data analysis and advanced algorithms enable volume prediction, better risk management and the explanation of malfunctions a posteriori to improve processes.

8 UNCITRAL (UN). (2017). UNCITRAL Model Law on Electronic Transferable Records (2017). https://uncitral.un.org/fr/texts/ecommerce/modellaw/electronic_transferable_records

Thus, although there are many tools available to enhance and facilitate international trade, several factors (detailed in Part Two) mean that it is not currently possible to use them or at least exploit them to their maximum capacity. This being said, many initiatives in the field of digitalisation of international trade, through the increasing use of these technologies, have been launched in recent years. This first part presents them and covers three areas:

- > Customs, which has proved to be the pioneer area of digitalisation;
- > Trade Finance, an area where efforts need to be pursued and reinforced, and
- > International logistics through the example of the bill of lading.

I. Customs: a pioneering sector in the field of digitalisation

A. Initiatives at the international level

International organisations have been working for years to harmonise the pillars of customs, leading to the adoption of international conventions under the aegis of the World Customs Organisation (WCO) for species and customs classification, origin, value, ISO country codes and the ICC Incoterms® rules. This harmonisation movement is complemented by a digitalisation movement pushed by international organisations with the constant support of ICC for the past several years, making customs a pilot sector in this digitalisation drive.

In view of the high costs involved in producing paper documents required for customs declarations and checkings, and the time-consuming preparation that causes delays in supply chains, WCO Customs Co-operation Council has decided to address this issue by taking a number of steps such as proposing data models to its members, and as far back as 2012, it adopted a recommendation on the dematerialisation of supporting documents. This recommendation is based on Chapter 3 of the General Annex of the revised Kyoto Convention and proposes to WCO members, as well as Customs and Economic Unions, a four-step approach::

1. Identify strictly necessary supporting documents;
2. Remove the requirement to submit supporting documents that have already been submitted in electronic format;
3. Release and clearance of cargo based solely on electronic declaration and automated verification; and

4. Verification by automated customs clearance systems of the information contained in the electronic supporting documents.⁹

For its part, one of the priorities of WTO is the computerisation of customs systems and the dematerialisation of supporting documents. This is one of the issues of the Trade Facilitation Agreement adopted in 2013, which entered into force in 2017 and has been ratified by 142 countries. Article 10 provides guidance to governments on how to simplify formalities and documentation requirements for imports, exports and transit. It is recommended to use the least restrictive measures to ensure the rapid release and clearance of goods, and accept paper or electronic copies of supporting documents.

As a result of these various digitisation phases, a number of customs documents are already accessible to French and European operators:

- > The customs declaration used for both exports and imports was dematerialised in 1998 (revised in 2007), when it took the shape of a Single Administrative Document (SAD) with an harmonised Form (Cerfa) for all EU Member States;
- > Accompanying documents for transit declarations;
- > Declarations of deposit or temporary storage (currently being dematerialised);
- > Safety/surety statements;
- > Transport documents (except the bill of lading).

Several other European database tools are also available:

- > EMCS (Excise Movement and Control System);
- > EORI (Economic Operator Registration and Identification);
- > SEED (System of Exchange of Excise Data);
- > EFTI (European Freight Transportation System);
- > E-Freight of the IATA organisation.

B. Chronology of EU initiatives

The European Union started very early to take an interest in the digitalisation of customs. Indeed, as early as 1997, the New Computerised Transit System was launched with the aim of “computerising procedures to ensure real-time monitoring and control of operations.”¹⁰ In 2003, the European Commission

9 Customs Cooperation Council (WCO). (2012). Recommendation of the Customs Co-operation Council on dematerialisation of supporting documents. http://www.wcoomd.org/~media/wco/public/en/pdf/topics/key-issues/ecp/recommendations-approved-at-the-council-2012--demat_-e.pdf?la=en

10 European Commission (EU) (2001). *Communication from the Commission to the European Parliament and the Council—Strategy to prepare the candidate countries for accession to the 1987 EC-EFTA Conventions on a common transit procedure and the simplification of formalities in trade in goods* /*. COM/2001/0289 final */ <https://>

published a communication on electronic customs which contained proposals for a new simplified environment and paperless customs and trade, paving the way for a radical simplification of customs regulations and procedures and the integration of modern, efficient and uniform techniques in the EU customs union. The subsequent 2003 Council Resolution endorsed the objectives formulated in the Communication on Customs

This established the framework for the e-Customs initiative. Decision 70/2008/EC on a paperless environment for customs and trade, also known as the “e-Customs Decision”, is the main legislation related to the e-Customs initiative. It lays the foundations for a move to an interoperable electronic customs environment with a unified data system to facilitate communication between economic operators and customs authorities and to enhance security at the EU’s external borders.

The next step was completed with the adoption of the Union Customs Code (UCC) on 1 May 2016. This revised text aims in particular at a total dematerialisation of exchanges within European customs authorities themselves, and between customs authorities and economic operators. It seeks to simplify and speed up customs procedures. The transition to a paperless and fully digitised customs system was initially to be completed by 31 December 2020. However, in view of those many difficulties arising before attaining full digitalisation, some customs procedures are still trailing behind. This is why in 2018 the European Commission extended the transition period to 2025 (at the latest).¹¹

In 2020, the Commission achieved significant progress related to the successful implementation of the ongoing e-customs reform. Transition to a paperless environment is a priority for Member States and the Commission—a commitment which is reflected in the completion of several projects in the field of electronic customs (including developments in the EU Customs Code to harmonise common requirements for data in the electronic customs systems of all Member States). In 2020, DG TAXUD (Directorate-General for Taxation and Customs) continued the analysis of the prospective study on the future of customs in the EU to 2040, which was launched in 2019 and designed as a structured process to better understand those trends and drivers impacting EU customs and gather collective intelligence for the long-term future. The study was published by the Commission on 10 December 2020; it pictured the world of 2040

eur-lex.europa.eu/legal-content/FR/TXT/HTML/?uri=CELEX%3A52001DC0289

11 European Commission (EU) (2018). *Proposal for a regulation of the European Parliament and of the Council amending Regulation (EU) No 952/2013 to prolong the transitional use of means other than the electronic data-processing techniques provided for in the Union Customs Code*. https://ec.europa.eu/taxation_customs/document/download/356b3f36-13b5-4b7a-a1f6-28532717fbab_en?filename=amendment_ucc_20180302_en.pdf

and considered how policymakers can take action now to ensure that the EU Customs Union continues to benefit citizens, the environment and the economy. The findings of this foresight process fed the Commission's Customs Action Plan, which was launched on 28 September 2020 and sets out an ambitious vision and action plan to move the Customs Union to the upper level.

The European Single Window (ESW) for customs is an important contribution to the implementation of the e-customs framework and to the overall modernisation of the customs area. Following the preparation of the draft impact assessment, the Commission's *Regulatory Scrutiny Board* (RSB) adopted the report on 15 July 2020, paving the way for the development of a relevant legislative proposal. The latter was included in the Customs Action Plan and adopted in October 2020 by the College of Commissioners.

This one-stop shop will allow the various economic actors (within and outside the EU) dealing with customs to exchange their electronic information more easily. At present, companies have several interlocutors who each have their own portal and procedures. The ESW will bring these portals and procedures together in a single portal, thus saving time, costs, efficiency and simplicity.¹² On 19 May 2022, the EU Council and the European Parliament reached a political agreement on this one-stop shop. Political agreement confirmed at COREPER (*Permanent Representatives Committee*) on 15 June 2022. Therefore, the implementation of this window should be spread over several years.

Everything is speeding up. Indeed, for the EU's Directorate-General for Taxation and Customs (DG TAXUD): *"the strategy is to achieve a completely digital customs"*.

C. French initiatives

1. The DELTA Platform

It is now quite some time that the DELTA Platform represents the French platform for remote declarations. Since 2016, it integrated the former DELTA-D (simplified customs declarations) and DELTA-C (full declarations) and prepared for the transition to DELTA IE (October 2022-April 2023), which will see the implementation of a centralised Community customs clearance (disconnection of physical and declarative flows—one single representative office of representation regardless of the number of declaration offices in the EU) and the abolition of the SAD.

In addition, DELTA H7 (low value shipments) is being implemented.¹³

12 European Commission (EU). *The European One-Stop Shop*. Europa.eu https://ec.europa.eu/taxation_customs/eu-single-window-environment-customs_en

13 For more details, see Annex 11.

2. The National Single Window (GUN)

Digitalisation is also one of the priorities of the French Customs administration. In addition to the programme to deploy information systems in accordance with the European plan, it took a specific initiative regarding administrative documents, which are often required in paper format, and which are to be used to prove elements present in e-declarations. This initiative aims at setting up a national single window (GUN, see Annex 9) allowing the centralisation on a single portal of all customs documents and accompanying documents such as certificates of origin, certificates of conformity, phytosanitary certificates, export authorisations for dual-use goods, EUR1 movement certificates, AGREX export certificates, AGRIM import certificates, Union transit documents, common transit documents, air waybills, consignment notes, packing lists, etc. This national one-stop shop allows for an automatic and instantaneous control of those administrative documents required when completing customs formalities.

3. The FRANCE SÉSAME platform

Being the result of a partnership between the Directorate General for Customs and Indirect Taxation (DGDDI), the Directorate General for Competition, Consumer Affairs and Fraud Control (DGCCRF), and the Directorate General for Infrastructure, Transport and the Sea (DGITM), the France Sésame platform went live on 17 November 2021 and officially launched on 6 December 2021 by the Ministry of Economy, Finance and Recovery, the Ministry of Agriculture and Food and the Ministry of Ecological Transition. This free public platform offers a range of digital services: real-time monitoring, appointment booking, digital import file, notification services, etc., which enables all public and private users (logistics companies, forwarding agents, customs representatives, etc.) to have a single digital contact point at the borders for the three ports of Le Havre, Marseilles and Dunkirk in order to manage the controls—veterinary, phytosanitary, compliance with standards and EU criteria on organic farming—to be carried out on imported goods. Olivier Dussopt, Minister of Public Accounts, declared: *“With France Sésame, we are taking a further step towards unifying administrative formalities and giving concrete form to a project to simplify public action that is eagerly awaited by port operators.”*¹⁴

D. Initiatives of the International Chamber of Commerce

Due to its close relationship with WCO, the International Chamber of Commerce, through its members in specialised committees, plays a key role in the digitalisation of certain documents related to international formalities to facilitate international trade operations. These include e-certificates of origin, ATA carnets and e-phytosanitary certificates.

¹⁴ Press release of 6 December 2021.

1. The e-certificate of origin

The certificate of origin (CO) is a customs document which, in order to meet customs requirements, makes it possible to identify goods. The authority or body empowered to issue a CO expressly certifies that the goods concerned originate in a given country or group of countries. This certificate is generally used when the origin of the goods does not allow them to benefit from a preferential regime, or from reduced or zero customs duties, due to the absence of a trade agreement. This is why it is also called a “non-preferential origin certificate”. Origin is used to determine the duties and taxes, trade measures and regulations applicable to the goods. It is also used to compile foreign trade statistics.

Issued in France by the Chambers of Commerce and Industry, this certificate has been dematerialised in several stages. From the first online applications proposed by the CCIR Paris Île-de-France in 2002 to the issue of an electronic certificate by some CCI in 2008, and then by the entire network for several years via the platform proposed by the CCIR Paris Île-de-France,¹⁵ the evolution is constant. Once the application has been completed, the CCI endorses the document with a level 3 electronic signature (the highest level of security) and then sends the original certificate to the company under electronic format. It is deemed that every year CCI deliver more than 700,000 certificates of origin in France, and several millions worldwide.

It has been so successful that French Chambers will soon no longer issue paper certificates. Although for the past many years, CCI have issued electronic certificates of origin (signed PDF format), these were for the vast majority, accompanied by a request for a paper certificate, which was printed when the application was processed by the CCI. This will no longer be the case in 2023 as the next evolution foresees the end of paper certificates to be issued by CCI. An electronic certificate will therefore be issued, coupled with an electronic mask which will allow the exporter, if necessary, to print out his certificate himself.

However, several last obstacles need to be removed; among them the acceptance of such format by consulates (which certify documents after CCI) and by the customs of the countries of destination of the goods. While many consulates and customs still request a paper version of the documents and certifications from CCI that include an ink stamp and a handwritten signature, obstacles to the acceptance of e-certificates are gradually being removed. Electronic documents, or printouts of documents with a printed stamp and an electronically integrated signature upon validation by the ICC, are becoming the norm, as they are much more “secure” than a simple paper form.

¹⁵ See <https://formalites-export.com>

In order to go even further towards a totally dematerialised circulation of COs, the CCIR Paris Île-de-France, which heads the network of French CCIs in this field, and the majority of European CCIs work in close relationship with the International Chamber of Commerce and in particular, with ICC's World Federation of Chambers of Commerce, on the development of a system to verify online the authenticity of a certificate of origin in order to demonstrate that the CO produced, whatever its form, conforms with the one validated by ICC. Such a system already exists in the framework of the CO Label on certificates of origin, a kind of accreditation proposed by ICC and which allows member CCIs, so wishing, to be accredited subject to compliance with a set of specifications guaranteeing the respect of precise standards in the issue of certificates of origin. The main element of this system is a site which verifies the authenticity of existing COs since 2013, but gives only summary information on the accuracy of the CO issued (number, date, issuing CCI and exporter)—which many Customs consider insufficient. In order to accept electronic COs, even if they are printed by the exporter, Customs today request the possibility of checking the integrity of the information. This is why, from 2022 onwards, a system will provide automatic and secure access to the CO as validated by ICC, via a QR code integrated into the validation of the document by the CCI concerned, thus allowing Customs to verify that it exists and has not been modified.

Today, all documents accompanying a certificate of origin (export invoices, various certificates) can and are in fact subject to a dematerialised version that the exporter can print out if necessary. The only exception that remains is due to conservative regulations and concerns the sworn translations that CCIs legalise in the context of an export. These should remain in paper format from start to finish, as dematerialisation would deprive them of the «original» character they should retain. This is particularly the case if, after certification by the CCIs concerned, these documents are to be certified by the legalisation office of the MEAE (Ministry of Europe and Foreign Affairs). The MEAE requires that, before any certification by a CCI, sworn translators insert an «original» signature on both the source documents and the translations. It would indeed be most profitable to see progress on this particular point as the notion of «original» versus «copy» character of a document no longer has much meaning in electronic exchanges as the systems allowing their electronic circulation exist and are very efficient.

2. The prospects for dematerialisation of the ATA carnet

The ATA carnet (Admission temporaire/Temporary Admission), currently used in nearly 80 countries or customs territories, reduces customs formalities to a minimum and allows international trade to carry out operations under suspension of duties and taxes payable on goods that do not undergo any processing (exhibition products, works of art, filming equipment, etc.) and are intended to return to the national customs territory once the operation is completed. This procedure, which replaces the various customs documents with a carnet, makes it possible to take part in fairs and exhibitions, to present commercial samples or to use scientific or educational material.

The ATA carnet has been in existence since the early 1960s and has undergone various stages of modernisation, including the reduction of its size with the change from A3 to A4 in the 1990s. However, while many countries offer online platforms for applying for ATA carnets, a paper printout is still indispensable at the end of the process. In France, an online process is available since the early 2010s. It allows a quick, simple and efficient obtention of an ATA carnet via a single management platform: www.formalites-export.com. Whether be it an automatic import of lists of goods, trip description module, tracking of carnets, use of templates, online payment, etc., all these options are available, with the reservation that the operation will still end up with a paper printout of the carnet by the CCI.

Today, the criterion for the success of the electronic ATA Carnet project (see Figure 2) is that such ATA carnets be managed and coordinated at an international level. For this reason, a few years ago, WCO took the initiative to bring together all actors involved with a view to launching reflections and discussions. Thus ICC, which manages the ATA system at global level, presented and launched the project in 2016 with the support of WCO and started to build the project architecture with Belgium, Russia, China and Switzerland as pilot countries. In addition, ICC received confirmation from DG TAXUD by end 2021 that the e-Carnet ATA project was included into the EU Customs' strategic multi-annual plan.

In October 2019, a test phase for end-to-end electronic exchanges of ATA carnets was launched. Only a few transactions were successfully carried out before the pandemic slowed down the project and jeopardised the full-scale tests, which were scheduled for completion in 2021. However, the project was relaunched in 2021 and France, which is part of the project, as well as all countries using ATA carnets should be able to issue electronic ATA carnets as from 2023. Indeed, it has been decided that from 1 January 2023 onwards, every paper ATA carnet must have its electronic duplicate issued in parallel,

even if this electronic version is not used by the exporter.¹⁶ However, this new format will not yet be authentic. It will become authoritative when all countries are able to issue electronic ATA carnets. To accelerate this, a new initiative, *ATA Gateway*, was launched at the ICC World Chambers Congress in Dubai in November 2021. This project is designed to enable countries not having the possibility of developing an e-carnet system to access a system offering the basic functionalities for proposing an ATA e-carnet to their exporters. This project would take the form of a global database and is expected to be effective in 2023.¹⁷

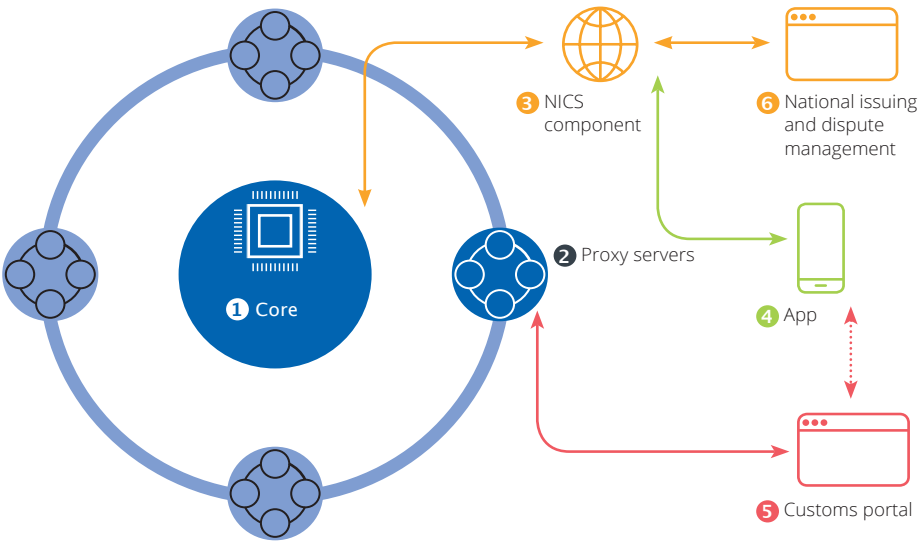


Figure 2: The 6 components of the e-Carnet digital environment

3. Phytosanitary e-certificates

Another initiative on which ICC and WCO have collaborated is the digitalisation of the phytosanitary certificate: ePhyto. An ePhyto includes all the information contained in a paper phytosanitary certificate. ePhytos can be exchanged electronically between countries, and their data can be printed on paper. ePhytos must be issued in accordance with ISPM (International Standards for Phytosanitary Measures) No. 12.

The International Plant Protection Convention (IPPC) ePhyto solution has three main elements to facilitate the exchange of ePhytos between national plant protection organisations (NPPOs):

¹⁶ Interview with Luc Dardaud, CCI Paris Île-de-France

¹⁷ Interview with Luc Dardaud, CCI Paris Île-de-France

- > A central server (platform) to facilitate the transfer of electronic phytosanitary certificates between NPPOs, either from and to their own national electronic system or using the generic system described below;¹⁸
- > An online Generic National ePhyto System (GeNS)¹⁹ that allows countries without a national electronic system to prepare, send and receive ePhytos;
- > Harmonisation of the structure and transmission of ePhytos through the use of a standardised flowchart, codes and lists.

The objective of this initiative is to enhance the security of trade in plants and plant products, with several benefits:

- > Transfer of globally accepted certificates safely, securely and instantly;
- > Reducing red tape for border agencies and businesses;
- > Reduction of time, risk of loss, damage or fraud of the certificate.

The Commission on Phytosanitary Measures (the governing body of the IPPC, part of the Food and Agriculture Organization of the United Nations) approved the ePhyto certificate format at its ninth session in 2014. From then until today, more than 2 million e-phyto certificates have been exchanged (about 100,000 certificates exchanged each month) with 108 countries registered in the system.²⁰

Box 1: Azura's testimony on the impact of the e-Phyto solution in Morocco

Azura,²¹ a French group specialising in the fruit and vegetable sector, has been producing and packaging tomatoes in Morocco for over 30 years. The group exports most of its production to European Union countries, totalling nearly 8,000 truckloads per year. This transport stage is crucial for the group, since the freshness and quality of the products transported depend on it.

Each of Azura's shipments is accompanied by a phytosanitary certificate issued by the Moroccan Plant Protection Agency, which attests the phytosanitary compliance of the exported products. These certificates are checked at various points in the supply chain and have been required for the admission of goods to European territory since the 1st January 2018.

These paper certificates required Azura to mobilise resources and time in order to obtain these documents and to transmit them by physical

18 For more information on the platform, visit <https://www.ephytoexchange.org/landing/hub/index.html>.

19 See <https://www.ephytoexchange.org/landing/gens/index.html>

20 International Plant Protection Convention (IPPC). (2022). Two Million ePhytos Exchanged as Demand Soars. <https://www.ippc.int/en/news/two-million-ephytos-exchanged-as-demand-soars/>

21 Azura is a family group of Franco-Moroccan origin created in 1988, specialising in the fruit and vegetable sector. It is one of the leaders in tomato production with 16,000 employees, 46 production sites and over 900 hectares of tomato crops.

means to the various control actors in Morocco and Europe. The paper documents also made it particularly time-consuming to rectify any errors made, and the risks of loss, damage or fraud were high.

The World Alliance for Trade Facilitation²² supported ONSSA in its efforts to introduce the ePhyto solution, a solution developed by the International Plant Protection Convention (IPPC) and allowing the digitisation of the processing and exchange of phytosanitary certificates internationally since March 2020.

For Laurent Thénégat, Customs Director at Azura, “The ePhyto project has enabled us to establish instant and secure exchanges with the key points in our logistics chain. The average delivery time for our goods has returned to what it was before the implementation of this phytosanitary standard. We have been able to optimise the use of resources associated with export procedures, while ensuring a better quality of service to our customers. With the implementation of the ePhytos electronic signature system, recognised by the TRACES system since the 1st September 2021, we are assured of the sustainability of this project.”

(Source : Alliance mondiale pour la facilitation des échanges)

II. Trade Finance: an asset to be strengthened

A. Definition and characteristics of this ecosystem

The purpose of trade finance instruments is to create a relationship of trust between parties, often located in different countries and who know little or nothing about each other. These instruments, due to the commitment of one or several bankers and via commercial documentary instruments such as documentary letters of credit or documentary remittances, will ultimately reduce risks²³ and secure financial commercial flows. For the importer, this means receiving the expected goods against payment, and for the exporter receiving the expected payment against the delivery of the ordered goods. In terms of financing, those trade finance instruments will serve as a basis for the establishment of “circulation credits” (financing the purchase and sale of goods), as well as that of “production credits”. Moreover, one of the tools of international trade is that of borrowing through the use of securities as collateral and/or the subscription of insurance to protect against the default of securities.

22 The Global Trade Facilitation Alliance is a public-private partnership that supports developing and least developed country governments in implementing the World Trade Organisation's Trade Facilitation Agreement. The Alliance is led by the Center for International Private Enterprise, the International Chamber of Commerce and the World Economic Forum, in cooperation with the Gesellschaft für Internationale Zusammenarbeit (GIZ). It is funded by the governments of the United States, Canada, Germany, and Denmark.

23 Commercial risks, those related to the creditworthiness of the counterparty (importer) or the ability of the exporter to meet its contractual obligations (performance risk), bank default risks, country default risks (political and non-transfer risks), market disruption risks, currency risks, etc.

Almost a century ago²⁴ the International Chamber of Commerce established rules for the use of documentary credits, one of the main instruments of trade finance, as well as rules establishing the sharing of risks, liabilities and costs between buyer and seller regardless of the mode of transport chosen. These rules, respectively known as the ICC Uniform Customs and Practice for Documentary Credits and the Incoterms® Rules, have since become universally recognised as some of the most effective soft law tools in international trade²⁵. Other rules of similar universal scope have since been developed by ICC, and for the past 13 years ICC has published the data of the international Trade Register, which records the information reported by the major banks involved in international trade finance. The latest edition, released in September 2021, contains credit risk profile data on 38 million transactions representing USD 19.2 billion of exposure and 28% of global trade flows. The main findings are as follows:

- > The year 2020 was a year of unprecedented disruption to international trade with a 10% drop in trade in goods and a 19% drop in trade in services, and resulted in a 16% contraction in documentary credit revenues;
- > The rise in open account²⁶ volumes for 2022 is expected to be more moderate in the future;
- > According to BCG, a partner in the ICC Trade Register: «by 2025, approximately 10% to 15% of trade finance and 20% to 25% of SME trade finance will be conducted via digital platforms as prices continue to fall and the costs of supplier services decline.»²⁷
- > Default rates for import letters of credit reach 0.18% and 0.59% for weighted rates,²⁸ a trend that can also be observed for import/export credits, whereas performance guarantees register a decline in their default rate in 2020 as compared to the previous years.

It seems that this activity, based on trade in goods and services and *essential for securing international transactions*, presents only a minor risk of default, which makes it difficult to understand the European Commission's proposals

24 The first version of the Rules and Practices dates from 1933; the INCOTERMS dates from 1936 and has been revised several times since then; the latest revision of the Rules and Practices (ICC Publication No. 600) came into force on 1 July 2007, and that of the INCOTERMS (INCOTERMS 2020) on 1 January 2020.

25 The International Chamber of Commerce, a private law body, is not sovereign and cannot issue binding rules. This binding force results indirectly from the submission of the parties to these rules by incorporation in their contracts. The positive law of almost all countries has recognised the binding nature of these rules by considering them as constituting legally formed contracts or by recognising them as customs or usages of international trade.

26 Transactions not backed by bank liabilities.

27 Deepesh Patel *TFG Weekly Trade Briefing*, 22 November 2021

28 Over the period 2015-2020.

in the banking package of 27 October 2021, which provide for an increase in the CCF (Capital Conversion Factor) from 20% to 50%.

B. A shared priority: the digitalisation of the document chain

The Trade Finance ecosystem is still dominated by physical/paper documents. However, this type of document has many disadvantages:

- > It requires a time-consuming manual compliance check, as is the case of documentary credits, thus increasing costs and eroding margins for both banks and companies;
- > It is a brake with respect to the requirements imposed on banks in terms of "*Know Your Customer*" because of the multiplication of paper documents whose authenticity, integrity and uniqueness are not guaranteed;
- > It can be the source of fraud with the production of false originals;
- > It generates significant delays due to the administrative burden of the numerous checks on the originals which rely on a plurality of actors, and remarkably complex verification techniques;
- > It represents a significant cost: according to a case study of a shipment of containers of roses from Kenya to the Netherlands conducted by Maersk and IBM in 2014, more than 30 people or organisations were involved, more than 200 interactions took place, the time between leaving the farm and selling in the shops was 34 days, 10 of which were related to document processing;
- > It is sometimes a deterrent for SMEs in their access to finance because of the supporting documents required and the impossibility of obtaining credit scoring on past transactions.

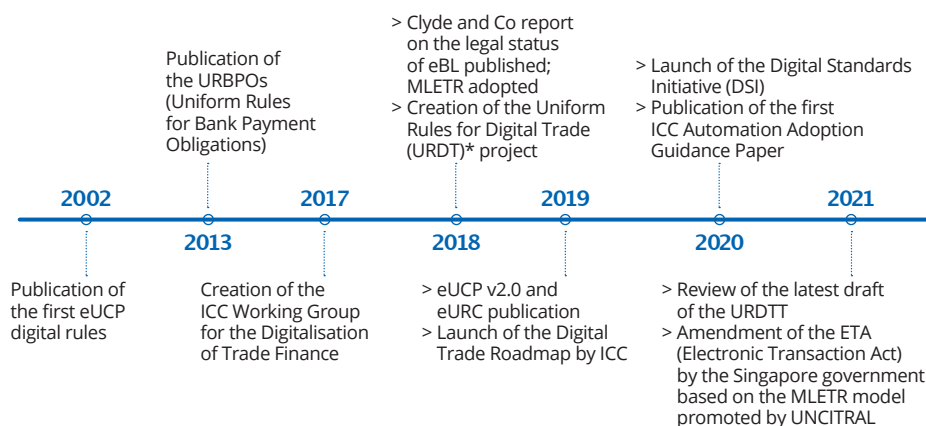
This is why, since the years 2000-2010, several players in international trade: maritime carriers, logisticians, bankers, Fintechs, multilateral organisations and the International Chamber of Commerce, have taken initiatives to dematerialise certain documents and securities in order to gain in profitability, reactivity and security in these operations. Indeed, the expected benefits of digitising paper documents are remarkable:

- > Better control of the risks associated with these operations;
- > Cost reduction;
- > Increased trade and competitiveness;
- > Access to new markets;
- > Automation of internal tasks;
- > Improving the cost-effectiveness of transaction processing;
- > Easier access to finance;
- > Optimisation of working capital requirements (WCR);

- > Centralisation of data;
- > Real-time data management;
- > Data harmonisation and standardisation;
- > Greater transparency and better communication between actors.

c. ICC rules and standards

In the 2000s, ICC's Banking Commission launched a project to develop rules, standards and best practices in the field of trade finance, which led to the adoption of a new body of rules (see Figure 3).



* After the first draft, the Drafting Group changed the name of the URDT (Uniform Rules for Digital Trade) rules to URDTT (Uniform Rules for Digital Trade Transactions) in February 2020.

Figure 3: Major steps in the digitisation of trade finance by ICC 2002-2021 (Source: ICC)

The e-UCP (*Uniform Customs and Practice for Documentary Credit for Electronic Presentation*) was adopted in March 2002 (v. 1.0), first revised in July 2007 (v. 1.1) and again in July 2019 (v. 2.0) to encourage the electronic presentation of documents in the context of a body of rules already codified (UCP 600—Uniform Customs and Practice for Documentary Credits).

The eURC (*ICC Uniform Rules for Collections – Supplement for Electronic Presentation*) supplements the *Uniform Rules for Collections* (URC 522) in order to accommodate presentation of electronic records alone or in combination with paper documents. It was codified for the first time in a digital format in July 2019 (v. 1.0).

The *Uniform Rules for Digital Trade Transactions* (URDTT), published in October 2021, have been designed to be consistent with UNCITRAL model laws, including those on electronic commerce, electronic signatures and electronic transferable records. Rules that now serve as a general framework for

digital trade transactions, ensuring global standardisation, consistency and conformity, a collective understanding of the terms and definitions, while encouraging and supporting the use of electronic records/documents/data.

As regards the ICC Incoterms® rules that are incorporated into most international contracts for the sale of goods, since their 2000 edition they specify that :

The seller shall provide, in accordance with the sales contract, the goods and the commercial invoice as well as any other proof of conformity that may be required at the end of the contract.

Any document to be supplied by the seller may be in paper or electronic form as agreed between the parties or, in the absence of agreement, in accordance with custom.

D. Typology of other initiatives

Over the past fifteen years, there has also been a proliferation of initiatives taken by a wide variety of players (see Figure 4). These players come from the financial, logistics or IT sectors. The tools used by these initiatives are often identical: online platform, electronic signature, electronic authentication, blockchain, smart contract. These technologies, the majority of them responding to highest standards, offer high guarantees for their users in terms of security, traceability and confidentiality of data.

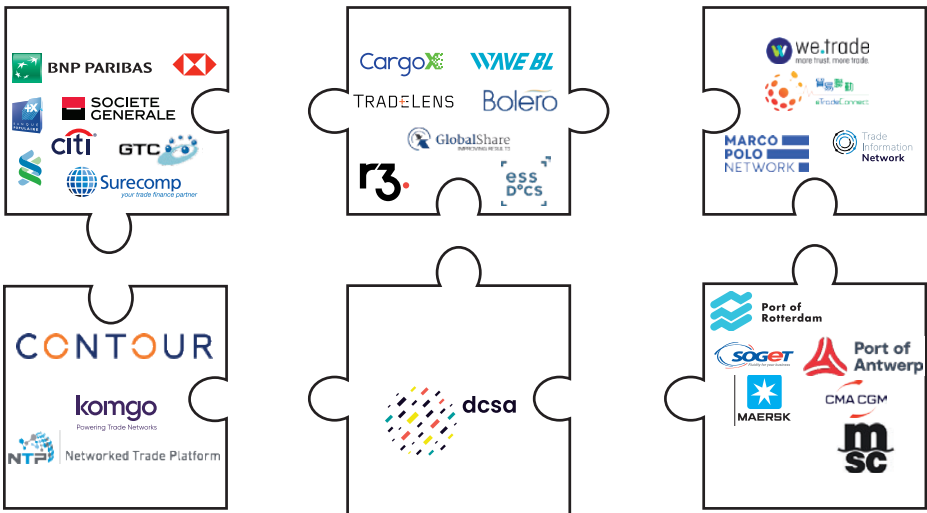


Figure 4: Overview of digitalisation initiatives in the field of Trade Finance (by Christian Cazenove, Société Générale and Eric Henry, BNP Paribas)

These include:

- > E-banking solutions developed by several banks with a strong international activity towards their customers in order to dematerialise financial operations (BNP Paribas, Société Générale);
- > Initiatives in the area of platforms for the secure transfer of trade documents such as maritime bills of lading (see Box 2 for the example of TradeLens);
- > Platforms for sharing data between logisticians to improve the flow management of containers and the experiences of customers;
- > The creation of new digital commerce standards that will become market references (DSI);
- > Platforms using blockchain to manage all trade finance operations such as we.trade (<https://we-trade.com/>), Contour (<https://contour.network/>) or Marco Polo (<https://www.marcopolonetwork.com/>).

It should be noted that some of these solutions have a global vocation, while others are more regional (see Box 3), some are based on the recognition of several jurisdictions (TradeLens) while others are the result of projects by groups of professionals in a particular sector.

For more detail, Annex 6 summarises some of these initiatives in a table, indicating their founders, date of creation, purpose and field of application.

Box 2: TradeLens, a powerful tool for the container transport industry

TradeLens is a multi-faceted tool for applying cloud and blockchain technologies to the container shipping industry. Originally launched by IBM Cloud and Maersk, it is now open to 15 carriers that account for 60% of the world's annual container volume (www.tradelens.com).

Its objectives:

- > Increasing operational efficiency;
- > Make informed decisions;
- > Reacting in real time;
- > To offer consumers a better service;
- > Ensure a reinforced collaboration between all partners: shippers, carriers, multimodal operators, port authorities.

Its features :

- > A marketplace allowing all partners to promote their solutions;
- > A platform to manage the issuance, transfer and receipt of documents such as bills of lading in a fully digitised manner;
- > An end-to-end visibility platform with associated analysis and decision-making tools.

An ecosystem of the global container freight industry.

Box 3: The Paperless Trade Framework Agreement in Asia, a pioneering region in the digitalisation of international trade

The Framework Agreement on Facilitation of Paperless Trade across Borders in Asia and the Pacific, a United Nations treaty deposited with the United Nations Secretary-General in New York, aims to accelerate the implementation of digital trade facilitation measures for trade and development. Designed as an inclusive instrument accessible to countries at all levels of development to develop their capacity to engage in paperless cross-border trade, the final text of the treaty was adopted by the Economic and Social Commission for Asia and the Pacific in May 2016. The trade cost reductions expected from the full implementation of cross-border paperless trade are estimated at 10-30% of existing transaction costs, depending on the current state of development of paperless trade in participating countries.

The agreement entered into force on 20th February 2021. Several states have joined the agreement and other ESCAP member states are in the process of completing their national accession processes:

Participant	Signature	Ratification, Acceptance (A) Approval (AA), Accession (a)
Armenia	22 Sep 2017	
Azerbaijan		2 Mar 2018 a
Bangladesh	29 Aug 2017	13 Oct 2020
Cambodia	29 Aug 2017	
China	29 Aug 2017	22 Nov 2020 AA
Iran (Islamic Republic of)	29 Sep 2017	29 May 2020
Philippines		23 Dec 2019 a

Country	MLEC (1996)	MLES (2001)	CUECIC (2005)	CPTA (2016)	MLETR (2017)
Brunei Darussalam	N/A	N/A	N/A	N/A	N/A
Cambodia	2019	N/A	N/A	Signed 2017	N/A
Indonesia	N/A	N/A	N/A	N/A	N/A
Lao PDR	N/A	N/A	N/A	N/A	N/A
Malaysia	2006	N/A	N/A	N/A	N/A
Myanmar	N/A	N/A	N/A	N/A	N/A
Philippines	2000	N/A	Signed 2006	Acceded 2019	N/A
Singapore	1998	N/A	Signed 2007	N/A	2021
Thailand	2019	2001	N/A	N/A	N/A
Viet Nam	2005	2005	N/A	N/A	N/A

ASEAN=Association of Southeast Asian Nations; CPTA=Framework Agreement on Facilitation of Cross-border Paperless Trade in Asia and the Pacific; CUECIC=United Nations Convention on the Use of Electronic Communications in International Contracts; Lao PDR=Lao People's Democratic Republic; MLEC=1996 UNCITRAL on Electronic Commerce; MLES=2001 UNCITRAL Model Law on Electronic Signatures; MLETR=2017 UNCITRAL Model Law on Electronic Transferable Records; UN=United Nations
Source : UNCITRAL. Compiled by authors

The Task Force also considered the question of the positive environmental impact of the digitalisation of international trade. A regional response is provided by a UNESCAP study (see Box 4).

Box 4: The environmental impact of the digitalisation of international trade (UNESCAP study): an important lever to be put into perspective with regard to the global emissions generated by international trade

A study²⁹ published by the United Nations Economic and Social Commission for Asia and the Pacific (UNESCAP) and the Asia-Pacific Research and Training Network on Trade (ARTNeT) assesses the environmental benefits of facilitating digitised cross-border trade. Global supply chains are complex and traditionally involve printing, shipping, processing, exchanging and eventually disposing of large quantities of paper documents. Trade facilitation, and in particular the implementation of paperless cross-border trade, can significantly reduce these environmental burdens. The study estimates that in the Asia-Pacific region alone, even under conservative assumptions, the emission savings from the implementation of paperless trade would be in the order of 14 million tonnes of carbon dioxide emissions (CO₂e) per year, in particular due to efficiency gains from digital data processing. The study also estimates that, on a global level, the emissions saved through the implementation of paperless trade amount to an average of 36 million tonnes, which is equivalent to the planting of more than one billion trees.

This reduction would be achieved through a combination of four factors:

- > End of printing of paper documents. As mentioned above, international trade involves 4 billion documents, each consisting of several dozen paper pages. To this must be added the emissions from ink and electricity.
- > Paper documents would no longer need to be circulated among the various actors, whether for signature or authentication, thus limiting emissions to digitised submissions.
- > Simplification and automation, leading to a reduction in the number of working hours needed to complete tasks. This results in lower costs for the environment (heating, air conditioning, electricity for office equipment and lighting, etc.)
- > Acceleration of transactions, reducing the time taken to store goods until the transaction is paid. For example, the implementation of a national electronic single window system in Azerbaijan has reduced the average time for goods to cross borders from 180 to 20 minutes,

29 Hardy, S., Duval, Y. & UN.ESCAP (2021). A primer on quantifying the environmental benefits of cross-border paperless trade facilitation. <https://hdl.handle.net/20.500.12870/3667>

while the duration of stay of cargoes in Benin was reduced from 39 to six days. Here again, storage is associated with several emissions, including those related to lighting, handling of goods, etc.

However, these figures should be put into perspective as they are particularly modest compared to the emissions from transport in international supply chains. Indeed, in the ideal scenario of all digital transactions, this reduction in emissions would represent only 1.2% of the emissions from fuel used in global supply chains, which have been estimated at 2.9 billion tonnes of CO₂e, or 23% of global greenhouse gas emissions.

According to an analysis by the promoters of the Trade Waltz portal, which provides a paperless environment for international trade actors, going paperless would lead to a reduction in CO₂ emissions of 431 tonnes per year for Japan, based on an assumption of 50 A4 pages per import/export transaction.³⁰

E. Cash management

These activities cover the functions of international payment, electronic money and cash pooling.

Most large companies are equipped with the latest technology to manage their foreign exchange hedging and make payments in foreign currencies. SMEs, on the other hand, rely on their bank, and as the latter does not necessarily have a competitive offer in the currency required, the SMEs are forced to turn to another bank on an ad hoc basis. This situation leads SMEs either to time-consuming internal management since several Excel tables have to be aggregated or to give up using the rarer local currency and resort to the major international trade currencies: dollar or euro. Exchanges between the SME and the bank are still often carried out by e-mail with purchase orders.

The time taken to complete the payment instruction is not instantaneous and it takes two working days for the supplier account to be credited.

³⁰ ICC Webinar Blockchain Technology for Cross-border Trade, 18 August 2021.

Box 5: The example of Ambriva's solutions in the field of currency management

Ambriva, a French fintech created nine years ago and supported three times by the BPI, offers solutions based on new technologies that meet the specific needs of SMEs in terms of international payments:

- > An online payment service from a platform that aggregates all of the company's foreign currency accounts and allows them to make an online payment with the actual exchange rate without any exchange of emails or documents;
- > Access to a full basket of currencies which offers the advantage of not paying the exchange rate risk usually borne by the supplier when using USD or EUR;
- > Access to a data visualisation tool, that can be shared internally among all departments, and shows all payments made or scheduled, thus providing a more global strategic vision of one's commitments;
- > Access to an advice service with instant answers on foreign exchange and currency questions.

To sum up, the benefits of this type of solution, which mixes in-house developments and tools produced by white-label partners, are of several kinds: in the short term, time savings of around 90% in the payment instruction phase and around 50% in the currency delivery phase; in the medium term, more effective management of one's foreign exchange cover with increased use of local currencies; and a more strategic vision thanks to tools for steering one's international payment policy.

The example of the letter of credit

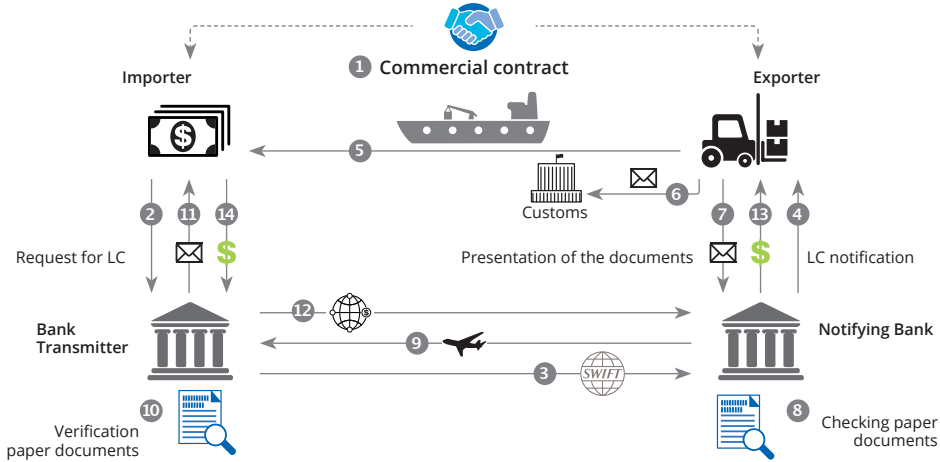
Subject to the rules laid down by ICC, the letter of credit³¹ (see Figure 5 for its operation) is a bank payment undertaking enabling companies, buyers (principals) and sellers (beneficiaries), to secure their commercial transactions by presenting documents in accordance with what has been agreed between the parties.

However, perceived by many companies as a reliable instrument, but not sufficiently attractive because of its administrative burden linked to the numerous paper documents requested and the time required to collect, present and check these documentary bundles,³² the work carried out by ICC which led to the adoption of the e-UCP rules remains to be confirmed.

31 Or, indiscriminately, the documentary credit.

32 "The letter of credit is very archaic because it requires eight documents to be sent with originals. It is not yet supported by digital rules" Eric Chavasset, SNETOR

Total paper process time: 12 / 15 days



List of standard required documents:

- | | | |
|--------------------------------|-----------------------------|----------------------------------|
| 1. Commercial invoice | 4. Certificate of origin | 7. Phytosanitary certificate |
| 2. Bill of lading (negotiable) | 5. Inspection certificate | 8. Legalised business documents |
| 3. Packing list | 6. Certificate of insurance | 9. Commercial paper (negotiable) |

Legende:

- ✉️ Sending physical documents by mail ✈️ Electronic document exchange 💰 Payment 🚢 Sending goods 🌐 Interbank payment

Total digital process time: 48 / 72 hours

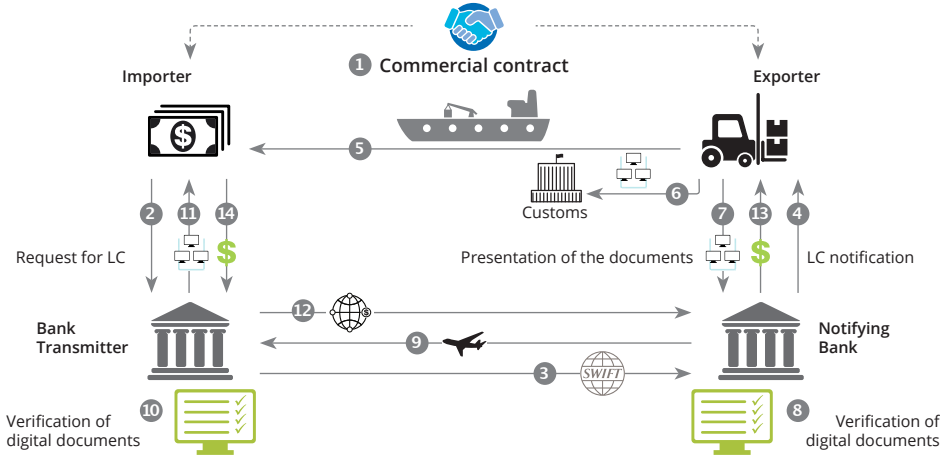


Figure 5: Comparison between the functioning of a “paper” letter of credit and an electronic letter of credit.

III. The importance of an electronic bill of lading

Logistics and its digitalisation, which mainly concerns the management of physical and information flows from supplier to customer, is such a vast subject that it deserves a book of its own. We have therefore chosen to focus on the digitalisation of a key document in international trade, the Bill of Lading. The Bill of Lading is used in the transport of goods by sea or inland waterways and represents 80% of the transport of goods at international level.

A. Digitisation of the bill of lading: a real game changer for international trade

In 2020, according to WTO, international merchandise trade was worth USD 17 trillion.³³ If transport by sea accounts for 80% of goods, the total value should exceed USD 13 000 billion. These documents exchanged between carriers, shippers and consignees of goods take several forms depending on the mode of transport: sea waybill, master air waybill, etc. These are divided into two categories: on one hand, negotiable bills of lading which constitute at the same time a contract of carriage, a receipt for the taking over of the goods by the carrier and a document giving its legitimate holder the exclusive right to have the goods transported handed over to him, and on the other hand non-negotiable bills of lading.

In case of multimodal transport combining road, air and rail transport, the documents used (e.g. air waybill-AWB, FIATA FBL, railway consignment, multimodal transport BL) are not negotiable and do not represent a title giving access to the goods.

The case we develop here solely concerns the negotiable bill of lading. For centuries it has been the main document in international trade and is considered by those involved in maritime transport to be essential: “the key that will change things is the dematerialisation of the maritime bill of lading.”³⁴ Issued by the carrier, it is transmitted from the seller to the buyer, often via their respective banks,³⁵ and allows delivery to be made at the port of discharge. This document fulfils three functions. It represents an acknowledgement of receipt of the goods, proof of a contract of carriage, and a negotiable document that allows the goods to be released at destination.

33 WTO. (2021). World Trade Statistical Review 2021. https://www.wto.org/english/res_e/statis_e/wts2021_e/wts2021_e.pdf

34 Interview with Marc Bourdon, CMA CGM.

35 In the framework of documentary credits in particular. Open account operations, not backed by TF instruments (bank commitments), concern 80% of financial flows.

This last characteristic means that the holder of a bill of lading has specific rights and potential liabilities in relation to the goods carried by the ship. Indeed, as a “document of title”, it carries legal effects and attests to a right of ownership of the goods, which will enable the holder to recover the goods at destination. It is interesting to note that, between the port of loading and the port of discharge when the buyer will be able to retrieve his goods, there will have been a changeover as to who is the holder of the bill (see Annex 10: How to read a bill of lading).

B. The case for digitising the bill of lading

Since the 2000s, several players in international logistics and maritime freight have been mobilising in favour of a maritime e-connaissancement or eBL. Indeed, the digitalisation of such a master document for international trade would have several advantages:

- > Elimination of mailing fees for transport documents because cloud-based solutions and blockchain technologies allow for secure transfer of documents among peers and waive the need to pay postal fees to deliver physical documents;
- > Business continuity by avoiding delays or interruptions in replacing damaged or stolen paper bills of lading as eBLs are stored in digital formats that are always accessible and can be transferred;
- > Greater security against fraud or counterfeiting: digitally signed and encrypted eBLs are stored securely, thus eliminating the problems of falsification, manipulation or theft of documents that are multiplied in the paper economy with its three originals;
- > Improved cash flow for shippers: today physical flows can be faster than documentary flows, especially for short lines in intra-regional trade. This means that a container ship arriving at the port of discharge before the original paper bill of lading is available for delivery of the goods must pay charges for exceeding the vessel's stay deadline, port taxes and demurrage.

The legal issues raised by the eBL

Transferable documents, such as the negotiable bill of lading, remain essential in international trade as they enable strengthening the rights to the goods; thus only the holder of a negotiable bill of lading is legitimately entitled to have the goods delivered to him. Such rights, incorporated into original documents of title drawn up on a paper medium, are based on the possession of the document of title and are transferred by the transmission of this possession. Thus the possession of a document of title, which is eminently material, has long been seen as incompatible with the immateriality of rights established by digital media.

Therefore, the main problem when presenting an electronic bill of lading resides in knowing how to produce an electronically-implemented document possessing the same functions as those of holding a paper document.

For such reasons, in particular the inability to find an immediate and simple answer to this question, the electronic bill of lading is way behind in the general digitalisation of international trade which permits an electronic presentation of most other documents.

Today, several companies offer secure digital platforms for the transfer of documents in electronic format. Among the companies offering such a service are TradeLens, Bolero, EssDocs, Wave, CargoX, etc.

The ICC Banking Commission commissioned Clyde & Co in 2017 to conduct a legal analysis on the legal status of e-cash (EBL). The report summarises the legal issues involved, details the solutions in 10 jurisdictions (USA, China, Brazil, India, Saudi Arabia, Germany, the Netherlands...) and provides a tentative conclusion.³⁶

The technology chosen for digitisation must ensure possession or its functional equivalent, exclusive control by a single bearer or holder. It is therefore not sufficient to have a PDF version of a paper document as it may be sent to several people simultaneously. It is essential to have technologies that allow electronic documents to be transferred, and especially their exclusive control, in a safe and secure manner.

The Model Law on Electronic Documents adopted by UNCITRAL in 2017 provides the legal solution by laying down rules of principle ensuring functional equivalence between transferable paper documents and transferable electronic documents. However, it requires transposition into the domestic law of the various countries. However, to date, only a handful of UN member countries: Bahrain, Abu Dhabi, Singapore, etc. have included this model law into their domestic legislation. Several examples of foreign legal frameworks which are already compatible or in the process of becoming so can be found as an annex.

Thus, despite all these initiatives, the Digital Container Shipping Association (DCSA) estimates that eBLs issued in 2020 represented only 0.1% of all BLs issued! According to this organisation, if this share rose up to 50%, it could lead to a saving of USD 4 billion a year for the shipping industry globally.

36 Clyde & Co, ICC. (2018). The Legal Status of Electronic Bills of Lading. A report for the ICC Banking Commission. https://www.clydeco.com/uploads/Files/The_Legal_Status_of_E-bills_of_Lading_-_ICC_and_Clyde_Co.pdf

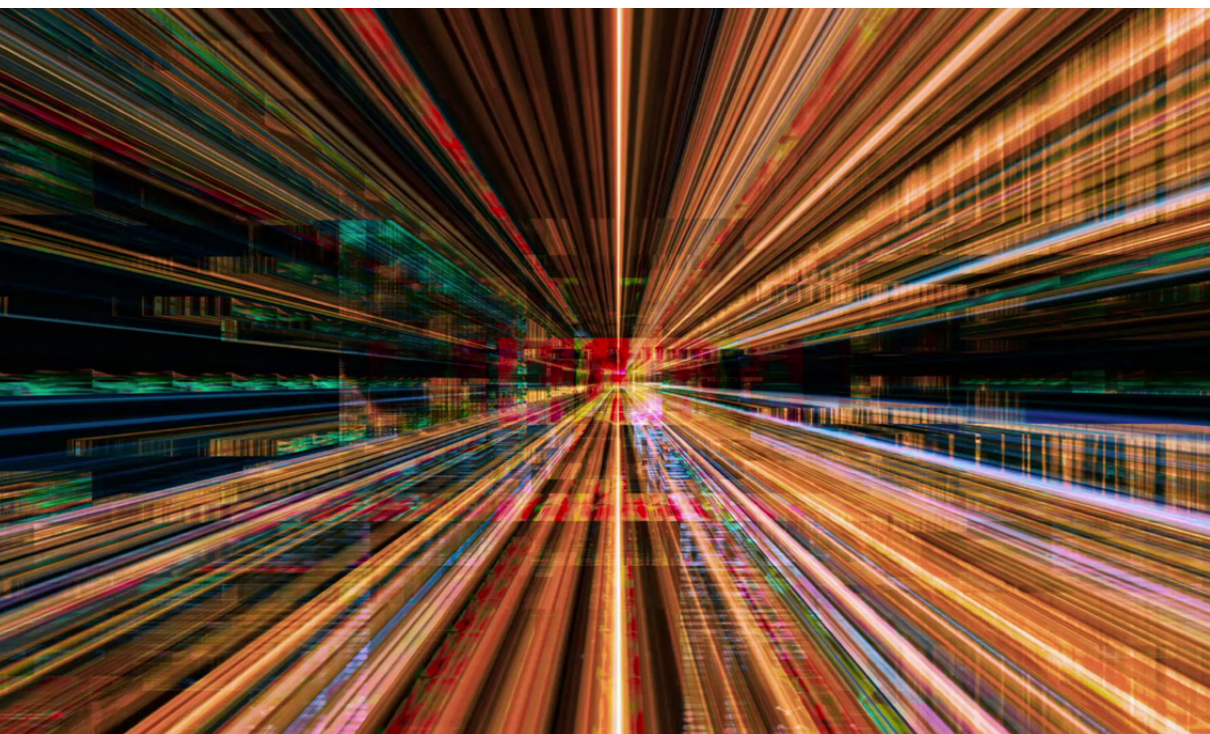
Conclusion

At the end of this first part devoted to an overview of the situation, it is clear that the digitalisation movement initiated decades ago in the customs field and since the 2000s for logistics and international trade finance activities is being pushed by companies and, more broadly, by all the stakeholders in the ecosystem, who expect many benefits.

Although there has been a proliferation of public and private sector initiatives with proactive projects underway for the past twenty years, we can only regret that their effects are still far too limited, mainly because of the obstacles these initiatives encounter.

PART TWO

Obstacles to Digitalisation in International Trade



It will take several years to complete the digitisation movement described above; it will also require investment and the establishment of effective cooperation mechanisms between all players in the ecosystem: companies, their bankers, their transporters and their logisticians, prudential control authorities, customs administrations and multilateral organisations in charge of the development and enforcement of international trade rules.

Many obstacles still face digitisation and include:

- > Business and company management methods out of phase with the ambition needed for this transformation;
- > Conflicting orders and legal frameworks;
- > A lack of interoperability between international norms and standards.

I. Management not conducive to the digital transformation of organisations

A. Lack of co-operation and silo work in administrations and companies

The management of international customs and transport flows in an industrial group involves a large number of interactions with numerous contacts, both internally and externally. Internal contacts may concern sales administrations, logistics, purchasing, finance, accounting, legal, IT, etc., while the external contacts concern customers, suppliers, logistics service providers, carriers, software publishers, customs authorities, etc. Hence the need for effective management tools and the importance of setting up cross-functional, project-oriented management committees to share ideas and discuss users' needs. Such a requirement also exists in administrations. It has been observed that consultation between IT departments of different administrations is insufficient and leads to an increase of uncoordinated standardisation approaches, for example to produce secure documents. Thus, this observation by the IT manager of the Directorate General of Customs who regrets that "*development is done in silos*" and that there is not

enough “pooling among the various players. Processes are dematerialised but still too many notes circulate in paper format. On this case, about ten different IS exist for notes, but there is no pooling.”³⁷

B. The difficulty of changing habits within teams

The difficulty of changing habits is identified as one of the main obstacles by most promoters of dematerialisation. Thus, Hervé Sanglard (UDITIS), presenting the functioning of the successfully tested ATA e-carnet pilot application, said at the WATAC World Congress in Rio de Janeiro: “At every step in the digitalisation process, it is above all from the human side that obstacles may arise.”³⁸ Without doubt, there is still room for further training and awareness of digital culture in international trade.

C. The ambiguous relationship between simplification and digitalisation

The digitisation of documents sometimes offers opportunities for the administrations conducting those changes to enrich their own data bases by collecting further information from businesses; this may represent an administrative burden for the latter. However, providing more data may allow for a more refined risk analysis and a better targeting of customs controls on risky flows. Thus, reliable operators benefit indirectly from providing more data to customs.

The crucial need to ensure security, integrity and authenticity of digitised documents and platforms is of growing concern; this may lead to an increase in the complexity of procedures, even though one of the objectives of any digitisation process is simplification, a paradox known as the “digital transformation paradox.”³⁹ Nevertheless, the new technologies, to which this White Paper refers, provide a high level of security and authenticity, and switching from one system to another just requires a period of adaptation. It is here appropriate to reassure companies and administrations using these technologies that their use will not lead to any increased complexity of procedures.

D. The limitations of reporting software and tools

Since the 1990s, several generations of tools have been used in companies:

- > Paper and trade-specific software in the 1990s;
- > SAP-type ERP in the 2000s with significant process standardisation effects, but for Customs managers maintenance of such a specific trade module represented an additional cost;

37 Interview with Christophe Vandervoorde, DGDDI.

38 Uditis (n.d). Pilot phase of the Digital ATA Carnet. Uditis.ch <https://www.uditis.ch/timelineArticle/Phase-pilote-du-carnet-ATA-digital>

39 Bensalem, A. (2020). The digital transformation paradox in post Covid-19 supply chains. White paper INSEEC U.

- > Reporting tools and SharePoint-like portals in the 2010s, and more recently, teams tools, cloud solutions, artificial intelligence, distributed blockchain technologies and other APIs.

The dialogue between IT professionals and those from customs and transport is not always easy as turnkey solutions are unfortunately not always adapted to the reality of operations and regulatory constraints. It is often necessary to integrate customs processes into the ERP, to implement specific KPIs to monitor costs and deadlines, and to provide an interface with the remote declaration systems of customs administrations (e.g. the DELTA system for France). The IT solutions implemented are often mixed with data scattered in several sources: ERP, software publishers, administration platforms and internal Word or Excel files.

E. Barriers to investment

In the private sector, trade finance represents around 5% of the activities of generalist banks and, depending on the institutions themselves and their regions of operation, concentrates a more or less significant number of digitalisation projects, given the characteristics of these activities and the emerging competition from Fintech. The financial committees in charge of validating investments are sometimes slowed down either by the narrow scope of the targeted activities, or because of a relative lack of profitability, or still because of a lack of knowledge of these activities perceived as complex, time-consuming, archaic and unable to renew themselves.

The acceleration of the obsolescence cycle in the range of technologies on offer may also be a rational factor in postponing a decision, considering that it is better to wait for the next generation of tools, which will be more efficient and accessible.

A webinar organised by ICC France and Credimpex on 10 February 2022 on “The Challenges of Trade Finance in Supporting the Changing Trade Environment of the 21st Century” showed that investment in digitalisation, automation, dematerialisation of documents and procedures were among the strategic priorities of banks.

In France, several public sector administrations manage public order documents concerning only small quantities of goods. In this case, the cost/opportunity balance is not very favourable to investment. This is particularly true for certain public order documents that are subject to a National Single Window.

Moreover, when the Customs Directorate General, for example, sets up a new information system, it is necessary to inform all the operators in advance so that they can plan the resources needed to budget for the

changes to the IS, and to see what specifications and service contracts are needed when external service providers are used. In the case of large companies, this is not a difficulty, but when it comes to SMEs, there are problems of accessibility given the methods of implementing digitalisation.

II. A legal framework not always adapted

A. The harmonised framework proposed by the UN: a particularly relevant basis

The United Nations Commission on International Trade Law has done important work on harmonising model laws that facilitate the digital transition: electronic signature, e-commerce, transferable electronic documents.

The basis of these model laws proposed to the various legislators is particularly relevant and one can only hope that these texts will be transposed as widely as possible into the law of UN member countries.

The document entitled *UNCITRAL, HCCH and Unidroit Legal Guide to Uniform Instruments in the Area of International Commercial Contracts, with a Focus on Sales* states in this regard:

418. The use of electronic information in contractual transactions, including across borders, has become prevalent for a number of reasons, including speed of transmission, ability to access data remotely and anytime, and the possibility of reusing data. It has also raised several issues with respect to the legal status of electronic information.

419. UNCITRAL has prepared texts that address contractual matters related to the use of electronic information. Those texts include the UNCITRAL Model Law on Electronic Commerce (1996),⁴⁰ the UNCITRAL Model Law on Electronic Signatures (2001),⁴¹ the Electronic Communications Convention (see paras. 425–430 below) and the UNCITRAL Model Law on Electronic Transferable Records (2017).⁴² Guidance texts have also been prepared by UNCITRAL in the areas of cross-border recognition of electronic signatures⁴³ and contractual aspects of cloud computing contracts.⁴⁴

40 United Nations publication, Sales No. E.99.V.4

41 Ibid., Sales No. E.02.V.8.

42 Ibid., Sales No. E.17.V.5

43 Promoting Confidence in Electronic Commerce: Legal Issues on International Use of Electronic Authentication and Signature Methods (United Nations publication, Sales No. E.09.V.4).

44 Notes on the Main Issues of Cloud Computing Contracts (New York, United Nations, 2019). Available on the UNCITRAL website.

420. UNCITRAL texts on electronic commerce are based on the three fundamental principles: (a) technology neutrality; (b) non-discrimination against the use of electronic information; and (c) functional equivalence.

421. The principle of technology neutrality requires that legislation not impose the use of or otherwise favour any specific technology, method or product. Under the principle of non-discrimination, a communication is not to be denied validity on the sole ground that it is in electronic form. Under the principle of functional equivalence, electronic communications may satisfy the purposes and functions of paper-based documents, provided that certain criteria are met. UNCITRAL texts provide functional equivalence rules for the paper-based notions of writing, signature, original, retention and transferable document or instrument.

422. UNCITRAL texts also provide rules on various aspects of electronic contracting, as well as on the use of electronic signatures, which may perform functions additional to those fulfilled by paper-based signatures.

423. In particular, part one, chapter III, of the UNCITRAL Model Law on Electronic Commerce deals with aspects directly relevant for electronic contracting, such as: formation and validity of contracts (art. 11); recognition by parties (art. 12) and attribution of data messages (art. 13), including acknowledgment of their receipt (art. 14); and time and

425. The Electronic Communications Convention pursues several goals place of dispatch and receipt of data messages (art. 15). Since a very large number of jurisdictions have already adopted the UNCITRAL Model Law on Electronic Commerce, the uniform law of electronic contracting set forth in those provisions has already gained broad acceptance.

424. Additional areas relevant for the use of electronic information in contractual transactions include privacy and data protection law, consumer protection law (the rules of which may also apply under certain circumstances to non-consumers) and payments law. Electronic Communications Convention and its relation to the CISG and the Limitation Convention.

related to establishing legal certainty in the use of electronic communications across borders. One of those goals is legally enabling the use of electronic communications in treaties concluded before the widespread use of electronic means.

426. To that end, it is declared in article 20 of the Electronic Communications Convention that the provisions of that Convention will apply to electronic communications exchanged in connection with the formation or performance of a contract to which a number of treaties apply. Among the treaties listed in article 20 are the CISG and the Limitation Convention, as well as the Convention on the Recognition and

Enforcement of Foreign Arbitral Awards (1958).⁴⁵ As the list of treaties is not exhaustive, the Electronic Communications Convention may apply to any international agreement applicable to a contract concluded across borders.

427. One effect of the interaction between the Electronic Communications Convention on the one hand, and the CISG and the Limitation Convention on the other, is the extension to the latter treaties of the principles of technology neutrality, non-discrimination against the use of electronic information and functional equivalence that underlie UNCITRAL texts on electronic commerce.

428. For instance, article 9 of the Electronic Communications Convention establishes the requirements for the functional equivalence between written and electronic form. Electronic communications compliant with those requirements will also satisfy written form requirements under the CISG when both the Electronic Communications Convention and the CISG apply.

429. Article 6 of the Electronic Communications Convention provides guidance on the determination of the place of business when electronic means are used. The notion of place of business is relevant to determine the applicability of the CISG and of the Limitation Convention.

430. The Electronic Communications Convention also contains provisions relevant for electronic contracting, namely on:

- (a) time and place of dispatch and receipt (art. 10, updating art. 15 of the UNCITRAL Model Law on Electronic Commerce);
- (b) invitations to make offers (art. 11, complementing art. 14, para. 2, of the CISG);
- (c) use of automated message systems (art. 12); and
- (d) input errors made by natural persons (art. 14).

B. Implementation of the EU e-Customs plan delayed and hampered

There are several obstacles to meeting the timetable for the dematerialisation of customs documents in the European Union:

- > Very different budgetary and human resources in the Member States;
- > Varying levels of digitisation between countries, which creates potential problems in trade;
- > Lack of data harmonisation between the EU and third countries;

⁴⁵ United Nations, Treaty Series, vol. 330, No. 4739

- > A lack of harmonisation of procedures: “there is currently no system for automating data to ensure that goods declared for import correspond in value to goods declared for export.”⁴⁶

Among the priorities identified by the European Union are

- > The upgrading of Member States’ customs information systems to enable interoperability, without which the main reforms (DCC) cannot be achieved;
- > The exchange of data sets between operators and customs authorities.

With regard to preferential certificates of origin, i.e. those that can be used on goods that move between two parties that have signed a preferential trade agreement. The European Commission’s objective is to replace paper proof of origin in all trade agreements with a certificate that can be placed on any commercial document and recorded in a database, as is the practice in the United States. In the GSP (Generalised System of Preferences), this new system (known as REX) came into force in 2017, but its full generalisation is planned for 2022.

Developments in specific areas are still too limited

Agricultural products

This sector still relies heavily on paper phytosanitary certificates according to the DGDDI (French Customs administration).

Dual-use goods

These are goods, that can be used for civilian or military purposes, which are subject to an export licence granted by the SBDU (Service des Biens à Double Usage) attached to the Ministry of Economy, Finance and Recovery. Although there is a connection to the GUN (single window), additional non-dematerialised documents may be needed to study complex products, and obstacles may be observed at European level due to different interpretations.

Proxies

The powers of attorney requested from traders as annexes to customs documents are still required in paper form under public accounting rules based on old texts.

Other public policy documents

Several other accompanying documents have not yet been dematerialised.

46 Interview with DG TAXUD

This is the “main irritant”⁴⁷ that needs to be addressed at European level as national initiatives are not enough.

C. French law still needs improvement

Without prejudice to the work in progress that the French authorities must carry out in accordance with the resolution adopted by the G7 Technology Ministers on 28 April 2021, in particular on the transposition of the UNCITRAL Model Law on Transferable Electronic Documents, priority here will be given to the ordinary law provisions of the Civil Code.

1. E-commerce provisions in the French Civil Code⁴⁸

Article 1366 of the Civil Code provides: “An electronic document has the same evidential value as a paper document, provided that the person from whom it originates can be duly identified and that it is drawn up and stored in conditions that guarantee its integrity.”

In practice, the probative value of electronic writing depends essentially on the reliability of the signature.

The electronic signature in its three forms (simple, advanced and qualified) is defined in paragraph 2 of Article 1367 of the Civil Code and in Articles 3.10, 3.11 and 3.12 of the eIDAS Regulation.

2. The essential aspect of the documents constituting “securities”

Banking instruments in trade finance are frequently used to secure payment for the sale of goods in circulation (i.e. being transported from the seller’s warehouse to the buyer’s warehouse) and to “frontload” this payment by allowing the mobilisation, by way of discounting or otherwise, of the exporter’s claim on the bank underwriting the guarantee or payment undertaking.

Thus, a documentary credit that can be realised in due course (payable by deferred payment or acceptance, e.g. 60 days from the date of shipment of the goods) will enable a seller to grant a supplier credit to its buyer. The silver lining is that the buyer will not assume the risk of this credit. Indeed, the risk will be assumed by the bank issuing the documentary credit, which will have entered into an irrevocable commitment⁴⁹ to pay, or by the cash flow of this credit, as the irrevocable bank commitment will be easily mobilisable.

47 Interview with Mr Vanderheyden, Mr Le Coz and Ms Gidouin.

48 This legal analysis was carried out by Dominique Doise, Cabinet Vatie, as part of the Paris Europlace MLTER legal sub-working group.

49 Commitment subject to submission of compliant documents.

For various reasons (risk, prudential ratio,⁵⁰ anti-money laundering, etc.), these payment instruments are drafted in such a way by the banks concerned that it gives them a right on the goods which they finance and guarantee during transport. This right on the goods will give them a greater or lesser degree of security, allowing in some cases a reverse charge of the credit.⁵¹

In the case of sea transport, this right to the goods is traditionally ensured by drawing up a bill of lading made out or endorsed to the order of the banker. Indeed, French law,⁵² (and almost all other foreign laws) considers a bill of lading to be a “document of title” conferring a right on the goods and apt to be transferred by a simple endorsement.

The negotiable bill of lading is therefore an instrumentum incorporating a negotium. In other words, it is a document that evidences a right and is also deemed to incorporate it in its substance.⁵³

The right evidenced by the bill of lading is a right on a commodity. This commodity has a value and as such can serve as a basis for financing, but this is not a liquid value as could be monetary claims incorporated in other securities such as bills of exchange or promissory notes.⁵⁴ When incorporated in securities, the rights concerned become easily transferable following the simplified procedures of an endorsement or even following simple manual tradition (when, for example, the first endorsement is “in blank”). It goes without saying that any transfer, whether using the manual tradition or an endorsement, presupposes, at least on the face of it, a tangible delivery, which has long been seen as incompatible with the immateriality of rights evidenced by digital media.

50 For example, EU Regulation 575/2013 (Article 166.8 b) provides for a conversion factor of 20% of the exposure value for letters of credit arising from the movement of goods; see also Annex 1 of that Regulation.

51 For example, a trader without a large financial base may finance a substantial purchase of raw materials by issuing a documentary credit payable, *inter alia*, against a bill of lading representing the raw materials, provided that the documentary credit is backed by another documentary credit opened by the banker of the ultimate purchaser of the goods and payable against the same bill of lading: the presentation of the documents in accordance with the first documentary credit should enable the banker who issued it (subject to certain legal and technical precautions) to be reimbursed almost automatically by the implementation of the second documentary credit issued to the trader.

52 Thus, a decision of the Court of Cassation of 17 August 1859, referring to Articles 231 and 283 of the then applicable Code de Commerce, held that the bill of lading, “as well as the goods of which it is a representation, is transmitted by way of endorsement”; Cass. 17 August 1859 in *Bulletin des arrêts de la Cour de cassation rendus en matière civile* n° 142 p. 214s. English case law had adopted a similar position as early as the end of the 18th century.

53 Following the formula of Didier R. Martin in “*du titre et de la négociabilité*”, D. 1993, p. 20; some of the following remarks are inspired by this article.

54 It should be noted that these currency instruments are now hardly used in Europe. However, their use is very frequent in certain Asian countries and generally on the African continent, where these foreign exchange instruments are often associated with documentary collections. They facilitate the setting up of financing that makes the best use (without increasing the risks) of the rate asymmetries that exist between geographical areas.

This is probably one of the main reasons for the failure of “electronic” documentary credits and collections. In the past (but also today for many operators), such documents (documentary credits or collections) which incorporate a right, were required in the original and could only be drawn up and signed on paper, even if the signature could take the form of a stamp or equivalent, as this was the only way of ensuring the uniqueness of the document.

It should be pointed out that dematerialised bills of lading exchanged via digital platforms and offered by third parties have existed for several decades now. They have not convinced so far because their effectiveness is based on a “club” system, setting common rules binding on all club members. However, if no club has succeeded imposing itself, ICC has done so in the field of Incoterms®, documentary credits, documentary collections and to some extent on demand guarantees.

The new approach chosen by the MLETR is promising (articles 11 and 15 in particular are very intelligently and clearly drafted) and the technical solutions, in particular the NFT (Non Fungible Token) seem to be able to provide an effective response to the problem of the establishment and use in digital form of titles incorporating rights. The question is whether we will be able to obtain a digital “interoperability” that is legally and technically as effective as that resulting from a signature on the front of a paper document.

3. **Compatibility of French positive law with the MLETR?**

A priori, current French law does not contain any provisions that would prevent the use of transferable electronic documents.

The Transport Code provides (Article L. 5422-3) that “the carrier or his representative shall deliver to the shipper, at his request, a writing known as a bill of lading...” It should be noted that since 1 October 2016, Article 1365 of the Civil Code has defined writing as consisting of “a series of letters, characters, numbers or any other signs or symbols with an intelligible meaning, regardless of their medium”; this is perfectly compatible with a digital document as long as the provisions of Article 1366 of the same Civil Code are complied with: “an electronic writing has the same evidential force as a paper-based writing, provided that the person from whom it emanates can be duly identified and that it is drawn up and stored in conditions likely to guarantee its integrity.”

As for the signature, it can of course be electronic, as Article 1367 of the Civil Code states that: “The signature required in order to complete a legal act must identify its author. It manifests his consent to the obligations arising from that act. [...] When it is electronic, it consists in the use of a reliable identification process guaranteeing its link with the act to which it is

attached. The reliability of this process is presumed, until proven otherwise, when the electronic signature is created, the identity of the signatory is attested and the integrity of the document is guaranteed, under conditions laid down by decree in the State Council.”

With regard to bills of exchange and promissory notes, the law (Articles L. 511-1s and L.512-1s of the Commercial Code) does not specify the nature of the media on which these securities must be drawn up, but only the fact that they must be signed (either in manuscript or “by any non-manuscript process”).

It should be noted that the Monetary and Financial Code (Article L.311-7s) authorises banks, under certain conditions (with regard to non-professional customers), to make available or provide their customers with information or documents on a durable medium “other than paper” (Article L.311-8) and that Article 456 of the Code of Civil Procedure now authorises courts to draw up their decisions in electronic form and to use electronic signatures.

The only issue that would justify legislative intervention would be the definition of transferable document as resulting from Articles 2 and 11 of the MLETR. The provisions of Article 19 of the MLETR (cross-border recognition of electronic transferable records) could also be included.

An alternative to the “reception” by our positive law of the MLETR exists: incorporation (via Article 1103 of the Civil Code) into the agreement of the parties. This incorporation could also be done indirectly by integration into the eUCP. Such integration, through a revision of the current e-UCP seems desirable as it would immediately extend the provisions of the MLETR to those countries that have not yet incorporated them into their substantive law, provided that these provisions do not conflict with the current substantive law of these countries. Furthermore, as it is the case for the *ICC Uniform Rules for Demand Guarantees* (URDG, ICC Publication No.758), a revised version of the e-UCP could incorporate a model form for opening electronic documentary credits. This form could have a didactic role, be attractive to users and could usefully contribute to an harmonisation of practices.

III. Insufficient interoperability between technical standards and norms for international trade actors

According to Philippe Roger, Orange Consulting⁵⁵: “The problem in the supply chain is not capturing information, but to ensure that all the data collected is coherent and to interconnect the systems and tools used to enable real-time management.”

All the persons interviewed have mentioned a multiplicity of players, standards, platforms and initiatives in the form of clubs. While some consider that this is an inevitable phase and that a selection will be made by the market with a small number of standards, others believe that this market organisation will not come naturally and that it is necessary to organise it by pushing for the establishment of bridges, in the form of APIs, between the different ecosystems. “My opinion is that there are too many players today, there is a lack of coordination in terms of information exchange, and little interoperability. There is a great need for harmonisation, standardisation and a common language, that would allow all these systems to become digital.”⁵⁶

While the logistics relating the creation of international standards such as the container or the barcode is accepted throughout the professional and academic world, it is quite a different question regarding the digitization of international supply chains which faces huge difficulties in establishing a dialogue between the different existing standards from one end of the planet to the other and among actors who do not pursue common objectives—whether exporters or importers, carriers, insurers or banks. “Customs authorities may have specific tools because they require specific and sharper information when analysing trade in goods—even if only to deal with smuggling and illicit trafficking.”⁵⁷

This observation is also shared by maritime transporters who describe a highly heterogeneous situation, for example in the use of dematerialised bills of lading: “The rules of engagement have not been harmonised among the players; it is the banks that have been the driving force on this subject, sometimes with their own tools developed internally, which leads to disparities according to the situations and the geography of the players.”⁵⁸

For example, in order to offer a 100% digital path to its customers for all operations, a leader in maritime transport such as CMA-CGM is obliged to

55 Charles, D. (2021). Digitization of the supply chain is emerging as essential with Covid-19. LinkedIn.com <https://www.linkedin.com/pulse/la-num%C3%A9risation-de-supply-chain-appara%C3%AEt-like-with-the-da-vid-charles/?originalSubdomain=en>

56 Interview with Julien Achard, OpenBanQ.

57 Interview with Marc Bourdon, CMA-CGM

58 Interview with Marc Bourdon, CMA CGM

connect its information systems to numerous platforms or clubs that are not necessarily interoperable:

- > Tariff portals: Cargosphere, PLS, Catapult
- > Container carriers: Tradelens, GSBN
- > Transactional platforms: GTM, Intrtra, CargoSmart
- > Trade finance: Contour, Marco Polo Network, Pole Star
- > ERP solution providers: Info; Nexus, E2Open
- > Trade documentation solutions: Bolero, ESSdocs, TradeLens
- > E-invoice providers: Tradeshift, edicom
- > Container managers: Containerchain, Matchbox, ezipass, Smartog

Transposition of the MLETR: one of the priorities of the ISD

In autumn 2020, ICC put in place a global strategy to accelerate the pace of digitalisation of international trade. Launched in Singapore, this strategy has resulted in the establishment of a structured international governance system representing the various stakeholders: international organisations (WTO, WCO, etc.), multilateral banks, standardisation bodies, trade finance actors (BAFT, IFTA) with:

- > A Board
- > An Industrial Advisory Board
- > A Legal Reform Advisory Board

A 5-year action plan has been adopted:

Issues to be addressed in 2021	Expected results in 2022	The ambition for 2026
Finding standards is complicated by the different views of those involved in international trade.	Finding simple standards: <ul style="list-style-type: none"> > Global Standard Map > Educational products > Adoption of the measures 	1. Increasing the use of standards
Outdated regulations. There is still legal uncertainty as to the acceptance of digital business documents.	Generalising the consideration of the MLETR: <ul style="list-style-type: none"> > Making the Legal Reform Board operational > Making advocacy with the MLETR more effective > 3 new states transposing the MLETR 	2. Adoption of the MLETR by major trade routes
Private law barriers. Existence of challenges interoperability in the management of legal titles and liability regimes.	Book of rules, practices and schemes: <ul style="list-style-type: none"> > e-UCP, URDTT, e-URC > Carrier rulebooks 	3. Making global rules available for digital

Issues to be addressed in 2021	Expected results in 2022	The ambition for 2026
Gaps in the adoption of digital standards. Limited clarity on core standards and limited activity to narrow the gap between standards.	Standards for data elements and documents : <ul style="list-style-type: none"> > Identified translation standards regimes > Definition of key data field standards for trade > Definition of ESG core data elements > Harmonisation of standards for CoO, WR, PL, e-BL and invoice 	4. Dematerialisation
Costly technical integration. There are few standards to simplify blockchain and non blockchain integrations.	Enabling interoperability: <ul style="list-style-type: none"> > Business case for adoption > Standard APIs for data exchange 	5. End-to-end connectivity

The toolbox

Among the tools already available to international trade actors to help them in their “journey” towards digitalisation, one may note:

- > ICC’s establishment of a dedicated DSI website—<https://www.dsi.iccwbo.org/>—which contains, in addition to governance details, a practical guide to legal reform for transposing the MLETR as well as transposing legislation in certain jurisdictions (see examples in Annex 7); and
- > A WTO and ICC publication in English in April 2022: ‘*Standards Toolkit for Cross-border Paperless Trade*’⁵⁹ which contains more than one hundred standards used in international trade: foundational standards (country, currency, units of measurement, etc.); identifier standards for persons and objects (LEI, BIC, EIN, HS code, etc.); document standards for commercial transactions including those for the three key processes of “buy”, “ship” and “pay” (catalogues, purchase orders, invoices, packing lists, payment advices, etc.); transport, transit and goods handling document standards used by carriers, freight forwarders and logisticians; standards for official control documents (declarations regarding transit, import, export, dangerous goods, etc.); as well as interoperable digitalisation frameworks that support the exchange of electronic trade documents.

The work undertaken within ICC is therefore promising. It allows coordination between international organisations and business representatives in order to share information on progress made, on persistent obstacles perceived, and on opportunities to launch regional calls for projects.

59 Ganne, E. (WTO), Nguyen, H. (DSI-ICC). (2022). Standards Toolkit for Cross-border Paperless Trade. <https://iccwbo.org/publication/standards-toolkit-for-cross-border-paperless-trade/>

ICC France is involved in this governance through its participation in the Legal Reform Advisory Board, which meets four times a year to exchange information on progress made on all continents.

The goal of achieving transposition of the MLETR in 100 jurisdictions by 2025 may seem very ambitious, but the work to promote the MLETR is intensifying in the G7 countries. For example, Germany and France are trying to catch up with the UK in Western Africa, by organising since 2021 in Senegal, Togo and Benin several awareness-rising webinars under the aegis of UNCITRAL. As for the UK, it has commissioned a study on the benefits of trade digitalisation in Commonwealth countries.

Conclusion

The examples studied have made it possible to identify certain obstacles to greater digitalisation: siloed ecosystems, lack of collaboration between the various players offering competing or complementary solutions, lack of interoperability between platforms, lack of recognition by courts of functional equivalence, insufficient linkage with companies and especially with SMEs.

A momentum for change has been built since 2020 with the Digital Standard Initiative coordinating efforts at international level and interfacing with multilateral organisations.

These efforts should lead to results that are expected by market players who do not understand the delay of B2B compared to B2C:

Today, when we talk about trade, we think mainly of e-commerce. The companies that do e-commerce (Amazon, Fnac) are far ahead of those that do B2B. It is not normal to be 5 to 10 years behind in professional life compared to personal life.⁶⁰

60 Interview with Eric Chavasset, SNETOR

PART THREE

Recommendations for Companies, Public Authorities and International Organisations



I. Recommendations for companies and trade federations

A. Investing in team training and developing the experts of tomorrow

The interviews conducted during this study confirmed the need for an ambitious training policy that would permit the digital transformation of companies to be successful. It seems that a number of ICC rules have already been digitised in the area of trade finance but are not known or not yet appropriated by the teams; this explains why they are underused, even though banks' strategies may be very proactive in this area. Although there are many training courses, including those offered by ICC France Conseil on ICC rules on documentary credits, stand-by letters and international guarantees, few modules exist on e-UCP, e-URC or URDTT rules.

A consultation between Trade Finance training organisations under the aegis of the French Banking Federation would make it possible to design new modules according to the needs expressed by clients in order to facilitate the dissemination and use of these rules.

It should be noted that English-speaking employees of international banks can access the online certifications delivered by ICC Academy (<https://icc.academy>). In the catalogue, at least two training courses are worth mentioning in that they help accelerate the digitalisation of trade finance operations:

- > *Digital Trade Finance and Fintechs*: this 5-hour module presents the digital trade finance landscape, multi-bank platforms, the presentation of electronic documentary credits, and emerging technologies.
- > *E-Invoicing Solutions Certificate (ESC)*: this 5-lesson module helps to understand the digital payment system and facilitates digitisation through case studies.

Furthermore, it is in the interest of internationally active companies to be able to recruit employees who are well trained in the digital rules, tools and

standards that are revolutionising world trade. It is to be noted that, even in business schools specialising in international trade careers, digitalisation of logistics and customs functions are not sufficiently promoted, perhaps due to the recent nature of the solutions developed, and the key role played by Fintechs and private players are often at the forefront. Hence our recommendation to companies involved in this transition is to propose case studies, and to schools to identify professionals likely to run courses with a strong operational component (logistics, customs, trade finance, etc.)

B. Establish an effective watch on customs information

Monitoring changes in national, European and international customs regulations is essential both to ensure the smooth running of international operations and to avoid any blockage of goods due to non-compliance with current customs clearance procedures, but also to take advantage of the opportunities offered by free trade agreements (absence of customs duties, for example). This regulatory monitoring, carried out internally or outsourced, is based on the identification and regular consultation of a number of official reference sites on tariff classification, origin, value and customs clearance procedures.

The customs professionals of the Task Force have identified a list of relevant sites:

- > **WCO Trade Tools:** this new subscription-based online platform (<https://www.wcotradetools.org/en>) is offered by the World Customs Organisation. The platform concentrates in one place data that were available on different platforms. It also provides access to all Harmonised System texts and notices, preferential rules of origin from hundreds of bilateral and regional economic partnership agreements, as well as WCO's work on customs valuation. This new database therefore enables companies to classify their goods correctly, appreciate their value and optimise flows by benefiting from preferential agreements, which represents significant savings in customs duties and formalities.
- > **The origin,** news and relative information (<http://www.wcoomd.org/en/topics/origin.aspx>)
- > **Classification decisions** by the WCO Harmonised System Committee are available online (http://www.wcoomd.org/en/topics/nomenclature/instrument-and-tools/tools-to-assist-with-the-classification-in-the-hs/h_s_classification-decisions.aspx)
- > **Advisory opinions,** comments and case studies from the WCO's Technical Committee on Customs Valuation are also available online (link)
- > **Access2markets** ([Access2Markets Welcome home page \(europa.eu\)](http://Access2Markets.Welcome.home.page.europa.eu)): this free database managed by the European Commission has recently

been revised and enriched. It provides access, product by product, to information on tariff barriers (customs duties, additional taxes, anti-dumping duties, etc.), non-tariff barriers (customs formalities, safety standards, etc.) and the sometimes complex rules of origin (in particular the list rules).

- > **CLASS** ([Class Consultation \(europa.eu\)](#)): this free database managed by the European Commission offers an access point to different types of information on tariff classification: conclusions of the Customs Code Committees, classification regulations, judgements of the European Court of Justice, Combined Nomenclature and explanatory notes, TARIC information.
- > **BTI** ([BTI Consultation \(europa.eu\)](#)): this free European public database lists all Binding Tariff Information (BTI) decisions taken by the customs authorities of the Member States.
- > **RITA** ([RITA Encyclopaedia | Portal of the General Directorate of Customs and Indirect Taxes](#)): this free French database allows you to view national and EU regulations applicable to customs clearance. It also allows you to search for tariff nomenclatures and to estimate duties and taxes.

C. Promote existing electronic certificates to businesses

The rise in the number of e-certificates of origin and e-ATA carnets has been boosted by the health crisis. The players involved in the French centralised export ecosystem around Team France Export should do much more to promote the CCIP's online formalities portal to exporting companies, thus allowing a faster increase of users. The CCIP says it is ready to travel to present the ATA carnets to regional CCIs.⁶¹

Trade organisations representing internationally active companies should communicate more widely to their members about these valuable and accessible online tools are real time-savers in their customs operations.

D. Integrating the international trade dimension into the digitalisation strategy of companies

Many companies are engaged in action plans to digitalise their activities in order to increase efficiency and responsiveness by automating repetitive and low value-added tasks and by collecting data that can be used commercially. This movement concerns all internal support functions. However, the specific needs of employees in relation to foreign partners, whether public or private, are sometimes not sufficiently addressed; this leads to blockages in the connection to certain platforms and to the interruption of document workflows.

⁶¹ Interview with Luc Dardauid, CCI Paris Île-de-France

The digital strategy must be systematic and take into account the international environment, as shown by the design of the digital customer journey at CMA-CGM. Indeed, the design of a digital path for this major player in maritime transport, which is diversifying into other sectors (road and air transport), is based on a range of digital solutions at all stages of the customer path, from quotation to payment:

- > Access the e-offers on the site,
- > Access to prices,
- > Place the reservation,
- > Add high value-added services,
- > Send delivery instructions,
- > Download the documents,
- > Manage bills of lading,
- > Tracking shipments,
- > Manage notifications,
- > Follow the containers,
- > Manage e-bills,
- > Pay online.

This is possible in an international environment covering 171 countries and involving a large number of partners and supervisory authorities.

The decision of who bears the cost of the investment internally is a key element as it is easier to get modest funding to run a pilot project that will create an interesting business case than to get funding for a more expensive overall plan.

E. Be on the lookout for innovations proposed by start-ups

French public authorities do not allow enough emphasis on those start-ups offering innovative solutions to practical needs encountered in the execution of international trade operations: currency management, container tracking, document digitisation, connectors to ensure interoperability between platforms, etc. Yet they have developed innovative products and services, often in the form of software or platforms that save time and reduce risks. It would be most helpful if those SMEs and federations representing these start-ups could identify them and disclose the tools offered in order to integrate them into their export strategy. A mapping of these players and the development of a typology of solutions proposed within a “TradeTech” is necessary. Indeed, when consulting the La French Tech⁶² dashboard, one will find such categories as “Travel Tech”, “Fin Techs” or “Media Tech”—each

62 See this link: <https://ecosystem.lafrenchtech.com/dashboard>

one of them able to federate start-ups by offering innovative solutions in the field of international trade. When looking at those start-up sectors present at Station F, one finds the same situation with headings such as “Legal Tech”, “Fin Tech”, “Blockchain” or “E-Commerce”. Such a mapping, carried out by La French Tech with the help of international trade players, would make it possible to enhance the value of available innovations and to make them known to SMEs in order to help them gain in reactivity, visibility and reliability in the midst of their international development.

F. Engaging in pooling experiments

Digitalisation solutions involve numerous stakeholders who, for one reason or another (transport, financing, control), intervene in international operations. It seems therefore essential to develop pooling experiments. This is what is done by bankers, carriers and logisticians with relevant partners in a specific ecosystem in order to ensure, for example, the traceability of containers in real time, to test a paperless flow of goods, or to test a pilot project.

G. Establish a single standard for internal documents

Company representatives in the Task Force indicated that work on standardising internal documents such as invoices, documentary credits, packing notes, etc. was essential before embarking on a digitisation process. This internal work aims at harmonising the format of the most commonly used commercial documents among the various entities of a group. Indeed, there sometimes exist significant differences in document format between the head office and its subsidiaries. This, of course, may depend on the legal rules applicable in the different jurisdictions, but it is recommended that international standards be used where they exist. The Toolkit of Standards for Paperless Trade published by WTO and ICC identifies in its part 3.1 the existing standards for commercial purchase documents⁶³:

- > UN/CEFACT/Cross Industry Catalogue
- > Application for CEFACT Cross Industry Quotation
- > Purchase order
- > Commercial invoice
- > Packing List
- > Dispatch notice

H. Propose a revision of the e-UCP rules

On 1 July 2019, ICC adopted the e-UCP version 2.0, but this is still largely underused in the ecosystem.

63 Ganne, E. (OMC), Nguyen, H. (DSI-ICC). (2022). Standards Toolkit for Cross-border Paperless Trade. <https://iccwbo.org/publication/standards-toolkit-for-cross-border-paperless-trade/>

This is why ICC France wishes to propose to ICC that it launches a revision of these rules in order to achieve three objectives:

- > Align them with the Model Law on Transferable Electronic Documents by adding a definition from the Model Law;
- > Add some useful provisions, particularly on compliance issues;
- > Facilitate its use by proposing two or three standard models for opening electronic documentary credits.

Should the ICC Banking Commission accept the French proposal, an international Drafting Group composed of experts and practitioners could be set up and probably able to propose a revision within approximately 18 months.

These rules of flexible law, which are based on the broadest possible acceptance by their recipients, are incorporated into French law in the law-binding agreement of the parties, which allows them to be incorporated into objective law.

II. Recommendations to the French public authorities

Facing the difficulty to identify correct contact persons within the French administration (MAE, General Directorate of the Treasury, General Directorate of Companies, etc.) regarding digitalisation of international trade, setting up an interministerial coordination in France seems essential to be in line with the progress made in the other more advanced G7 nations.

From a customs point of view, companies expect better synergies between digitisation and the certifications (in particular AEO) they have been encouraged to adopt to guarantee customs compliance and therefore profitability in terms of customs clearance.

AEOs should be used as a priority as trusted operators to test European and local customs digitalisation initiatives.

A. Incorporation of the Model Law on Transferable Electronic Documents into French law

The United Nations Commission on International Trade Law (UNCITRAL) has developed a number of texts, together with guides to encourage their incorporation, designed to remove obstacles to the use of electronic means and to ensure their legal value: the Model Law on Electronic Commerce (1999), the Model Law on Electronic Signatures (2002) as well as the United Nations Convention on the Use of Electronic Communications in International Contracts (bills of exchange, promissory notes, bills of lading, warehouse receipts, etc.)

Transferable documents and instruments play a key role because they entitle the bearer or beneficiary to demand delivery of a merchandise or payment of a sum of money in trade, transport, logistics and finance. However, dematerialising these documents could provoke a difficulty: how to eliminate the risks associated with unauthorised duplication of these documents.

The Model Law on Transferable Electronic Documents is based on three fundamental principles:

- > Non-discrimination with regard to the use of electronic communications;
- > Functional equivalence between paper and electronic transferable records ;
- > Technological neutrality (centralised or distributed registers, tokens, etc.)

Two delicate issues received particular attention during the preparatory work on the model law regarding maritime bills of lading: how to establish with certainty the identity of the holder of the bill of lading who will be entitled to claim delivery of the goods; and how to ensure exclusive control of the transferable electronic document in order to guarantee the transfer of rights in tangible goods by electronic means.

The answer to the first question is the need to ensure the uniqueness of the electronic document, and the answer to the second question is to develop a system of registers combined with a sufficiently secure technical process to resolve the issues of uniqueness and authenticity of the electronic document.

The incorporation into French law of explicit provisions on the functional equivalence between paper and electronic documents of title and bills of exchange is certainly a priority for French banks and companies.

At a meeting of the Task Force in 2021, the authors of the model law recommended a two-tier approach for transposition in France:

- > Insertion in the reference codes concerned (Commercial Code, Transport Code, Civil Code) of an article that would allow the issuance of the electronic document in accordance with the conditions set out in the model law; and
- > Adoption of a decree or order that would incorporate the Model Law on Transferable Electronic Documents and would provide guidance for establishing the needed level of security and reliability of the methods used.

The working group set up by Paris Europlace in January 2022 with French trade finance players pursues this objective.

At this stage of discussions, several avenues have already been discussed in the legal sub-group which brings together trade finance managers, legal experts from French banks and specialised lawyers.

A first track aims at introducing several amendments to the Civil Code in order to achieve two objectives:

1. Broaden the current definition of “writing” to also include the meaning of “transferable document”; and
2. Specify the rules that must be satisfied by the electronic transferable record to constitute the evidential equivalent of the transferable record.

In order to implement the first objective, it is proposed to complete Article 1365 of the Civil Code with a definition of a “negotiable instrument” which could be drafted as follows

Such a writing constitutes a negotiable document of title when it incorporates a right in such a way that it is impossible to enforce or transfer that right independently of the document of title.

In order to implement the second objective, several additions would be necessary to the Civil Code in order to specify the rules which guarantee the exclusive control of the electronic document: an addition to Article 1366 could say:

Where that electronic writing constitutes a negotiable document of title, the possession requirement for a paper-based negotiable document of title is satisfied if a reliable method is employed to establish the exclusive control of a person over that electronic negotiable document of title, and to identify that person as the person who has control.

Another addition to Article 1322 of the Civil Code appears necessary in order to delimit the scope of negotiable instruments. It could be drafted as follows:

However, where the law so requires or permits the transfer of possession of a paper-based negotiable instrument, this condition is satisfied, in the case of an electronic negotiable instrument, by the transfer of control over that instrument. The provisions of the previous paragraph do not apply to authentic instruments and dematerialised securities, such as financial instruments or negotiable securities, the transmission of which is carried out by transfer from account to account or by registration in a shared electronic recording device mentioned in Article L.211-3 of the Monetary and Financial Code.

Whether other codes such as the Commercial Code and the Economic and Monetary Code should also be amended is an open question on which there is no consensus among jurists. Some believe that amendments to the Civil Code are sufficient while others believe that provisions in the Commercial

Code concerning the letter of credit, the bill of exchange and the promissory note must be inserted in order to recognise electronic media.

Another possibility was proposed: instead of transposing the MLETR into the law of each Member State, why not push for its integration into the European corpus, in particular into the eIDAS Regulation? It led to some exchanges with representatives of DG Connect at the beginning of 2021, which led to the conclusion that there was no desire on the European side to deal with the subject of title documents in the revision of the eIDAS Regulation.

Finally, some bank lawyers favour a third option, the only one that they believe would provide a single legal framework. Indeed, the MLETR offers exemptions to states in Article 1.3, that of a multilateral international convention as is the case for bills of exchange and cheques.

ICC France asks the French public authorities to take up the issue of transposing the model law into French law and to study, together with the private sector, the most effective ways of transposing it.

This work is part of an exercise launched by the G7 Innovation Ministers in April 2021.

The French legislator needed to respond to the survey launched by the G7 Ministers of Technology and Digital Economy at the end of April 2021 on the compatibility of the national legal framework with the UNCITRAL Model Law on Transferable Electronic Documents.

Box 6 on the Annex to the G7 Digital Resolution of 28 April 2021

The G7 experts met in October 2021 to discuss the feedback from the national scoping exercises and to establish a comprehensive framework for G7 collaboration on electronic transferable records. Based on the results of this exercise, action will be taken in the following areas:

1. Addressing national legal barriers

Promoting the adoption of legal frameworks compatible with the principles of the United Nations Commission on International Trade Law (UNCITRAL) Model Law on Electronic Transferable Records 2017 through alternative legal solutions.

2. Promoting and supporting legal reform at the international level

Promoting international efforts that facilitate the use of electronic transferable records within the private sector—both bilaterally and in relevant international fora, such as UNCITRAL, and the work of development agencies to address the challenges of developing countries in implementing legal reforms.

3. Addressing technical issues and ensuring interoperability of standards

Support ongoing work in relevant international fora on interoperability and the development of international standards for the use of new technologies in trade processes (International Maritime Organisation, World Customs Organisation, United Nations Centre for Trade Facilitation and Electronic Business).

4. Cooperate on cross-cutting regulatory issues

Recognise that there are a number of cross-cutting regulatory issues relating to the use of electronic transferable records: data protection, capital requirements, know-your-customer and anti-money laundering regulations, regulations on electronic signatures and trust services, and work on solutions to facilitate the private sector's adoption of electronic transferable records, while ensuring a high level of integrity, security and trust.

We were not able to find out whether France responded to this survey, but it is noted that it is not among the most active G7 countries in this area.

Since then, it should be noted that on 11 May 2022, under German Presidency, the G7 Digital Ministers adopted a Declaration. This Ministerial Declaration reaffirms, in paragraphs 33 and 35 of a specific section devoted to electronic transferable records and digital information relating to the transport of goods,⁶⁴ the need to pursue a dialogue between government and industry on the implementation of appropriate legal frameworks consistent with the UNCITRAL Model Law on Electronic Transferable Records, support for like-minded legal reform internationally, as well as support for the digitalisation of administrative procedures related to freight transport so that paper does not remain the default option (see Annex 12).

B. The experimentation of a paperless corridor involving a French port

The ability to take part in the digital economy contributes to the attractiveness of French ports. Ambition 4 of the National Port Strategy adopted in January 2021 by the Minister for Transport, Jean-Baptiste Djebbari, and the Minister for the Sea, Annick Girardin, aims to make it such that ports become engines of innovation and digital transition with several concrete objectives: the merging of computerised cargo community systems (CCS),⁶⁵ the deployment of a one-stop shop, the adoption of a best practice guide for cyber security. It is a fact that no French port appears among the top 10 European ports in terms of freight volume. The market share of all

64 Ministerial Declaration G7 Digital Ministers' meeting (11 May 2022) <https://www.bundesregierung.de/blueprint/servlet/resource/blob/998440/2038510/e8ce1d2f3b08477eeb2933bf2f14424a/2022-05-11-g7-ministerial-declaration-digital-ministers-meeting-en-data.pdf?download=1>

65 Ministry of Ecological Transition (2021). National Port Strategy for a network of ports at the heart of logistics chains, economic development, and ecological and digital transitions. (p.17). https://www.ecologie.gouv.fr/sites/default/files/21002_strategie-nationale-portuaire.pdf

French ports represents only 8% of European maritime traffic and “40% of containers bound for France transit through other European ports.”⁶⁶ o this mixed picture, one may add that the main European ports have recorded greater increases in container flows than the three ports of Le Havre, Rouen and Paris (HAROPA): +9% between 2007 and 2021 for these three French ports compared with +47% for Antwerp, +42% for Rotterdam, +84% for Valencia, +38% for Genoa and +35% for Barcelona.⁶⁷

A white paper was published on 19 May 2022 by France PCS, an economic interest grouping formed by two leading SMEs in information technology for port and airport facilitation (MGI and SOGET). The paper, entitled “*Le numérique au service de la compétitivité des ports français*” (“Digital for the competitiveness of French ports”), contains a number of interesting recommendations, such as the one concerning the implementation of a one-stop maritime shop (GUM) under the terms of EU Regulation 2019/1239 offering, in coordination with Customs and port authorities, to shipowners calling at French ports a single interface instead of connecting to several different port information systems (Vigie-SIP, Escale, SWING, Neptune, SIRENE, Open Rive, etc.) Such an interface will initially be based on an interconnection of existing systems.

Another experiment worth mentioning is the paperless maritime corridor between Singapore and Rotterdam. Some governments, supported by their port authorities, have launched experiments in maritime freight between ports in order to test a fully paperless environment between shippers, carriers, brokers, customs authorities and port authorities. Singapore has entrusted a dedicated agency (DIMA) with the task of accelerating the digital transition, supporting companies and offering an attractive business environment. This is the framework within which the Trade Trust project was born: it is a technical framework based on distributed registry technologies that allows an interface with different platforms (paper and non-paper) used until now in silos by the different partners of an international trade operation.

At least two pilot experiments have taken place, one between Singapore and Rotterdam, and the other between Singapore and Australia to test, in the first case, delivery of goods using an electronic bill of lading and, in the second, the use of e-certificates of origin.

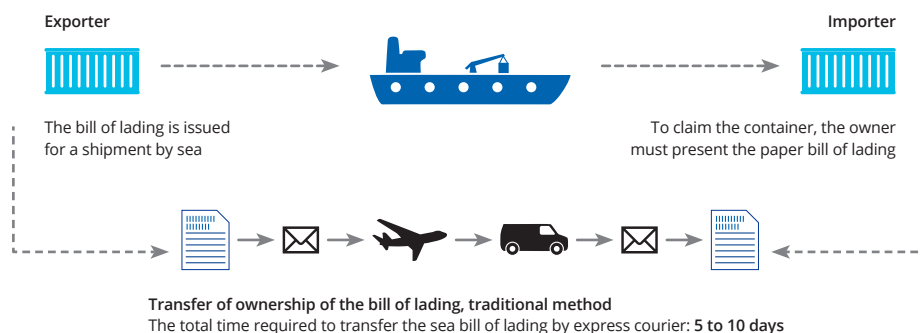
66 France PCS. (2022). White Paper—Digital for the competitiveness of French sports. (p.14). <https://fr.calameo.com/soget/read/006777430aa60e2a73db2>

67 Logisthinker—Logistics think tank (2022). 14 key themes and 28 concrete proposals to enhance the attractiveness and performance of French ports. <https://www.logisthinker.org/presidentielles2022>

Changes based on innovation

Allows all parties to access the electronic bill of lading

Paper bill of lading process: inefficient and laborious



Electronic Bill of Lading Process

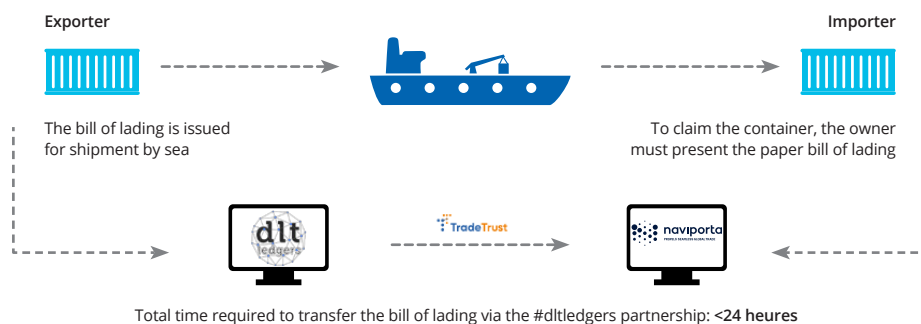


Figure 6: Summary of the Singapore/Rotterdam Corridor Experience with an Electronic Bill of Lading (Source: TradeTrust Newsletter issue 05 IMDA)⁶⁸

With this in mind, the experiment of a *paperless* corridor between the ports of Marseilles and Tangier was therefore recommended. These two ports having been chosen because of their mutual desire to get closer; a desire fully supported by both the French and Moroccan governments.⁶⁹ This pilot project would make it possible to test the obstacles encountered and the points of failure in the digitalisation of physical, financial and documentary operations on a real scale, and to objectify the benefits obtained in terms of time and costs. It would then be easy to compare the results of this experiment with those carried out between a non-MLTER port and a

⁶⁸ Source : TradeTrust Newsletter issue 05 IMDA, <https://www.tradetrust.io/news>

⁶⁹ Tournon, L. (2022). The port of "Marseille Fosse" explores in Tangier the means to reinforce exchanges with Morocco. Maroc-actu.com <https://maroc-actu.com/le-port-de-marseille-fosse-explore-a-tanger-les-moyens-de-renforcer-les-echanges-avec-le-maroc/>

MLTER port, and those between two MLTER ports, in order to consider the importance of transposing this model law into French law. ICC France wishes to submit this new action to the Monitoring Committee of the National Ports Strategy. Such an experiment will make it possible to contribute to the key performance indicator identified for this digital ambition: the rate of digitalisation of declarative procedures linked to port passage.

C. The creation of a centre for the digitalisation of trade

Following the example of ICC United Kingdom which launched the *Centre for Digital Trade and Innovation* (C4DTI) beginning April 2022, it seems appropriate to create an equivalent structure in France. It could take the form of an association or economic interest group (GIE) that would bring together all the players involved in the digitalisation of international trade: bankers, exporters, shipowners, transporters, traders, publishers, Fin Techs, Leg Techs, etc., in order to steer the national strategy for the digitalisation of trade. This privately funded centre could perform several functions:

- > Act as an interface with public authorities on all issues relating to the digitalisation of international trade (legal, technological, HR, standardisation, trade policy, digital G7, etc.);
- > Launch experiments and POCs (proofs of concept) on certain approaches to digitising procedures, documents or financing;
- > Ensure international monitoring and promote partnership agreements;
- > Stimulate research and innovation for the digitalisation of commerce.

D. Acceleration of the plan to digitise customs formalities in France with a view to transparency for operators

The French customs administration is one of the most committed and advanced customs authorities in the implementation of Article 6 of the Union Customs Code (UCC). It is often cited as an example by the services of DG TAXUD. Our interviews with several of its officials, and in particular the Deputy Director of Trade Policy, confirmed that this digitalisation project was a priority. By the end of 2020, 80% of the IT systems targeted by the CDU were covered.

Nevertheless, from the point of view of operators, particularly those who have made the effort to invest in AEO certification, further progress remains to be made on the following points:

1. The continuation of the dematerialisation of ancillary documents: powers of attorney, declarations of origin on invoices to replace EUR1 forms, which will involve new developments of the GUN.
2. The DGDDI has not yet integrated blockchain solutions into its IT developments, whereas numerous solutions have been successfully

developed and implemented by public and private players at international level. This seems to penalise, for example, the deployment in France of the digital version of the ATA carnets which is based on these technologies.

3. The systematic publication of notes to operators on the Customs website would be appreciated by operators. They are practical as they have an operational scope and help to ensure a smooth border crossing.
4. Binding Origin Information decisions in response to business requests are neither public nor accessible online as is the case in the United States. ICC France members believe that the creation of a database would be useful.

This legal analysis, aimed at drawing up a transposition model, will have to be shared with those civil law countries influenced by French law, in particular the Maghreb and West African countries governed by OHADA law (Organisation for the Harmonisation of Business Law in Africa).

E. Promoting Trade Tech—a new category of start-ups within La French Tech

Further emphasis should be brought forward, within La French Tech, on all start-ups involved in facilitating international trade through new technologies. This would help the export business ecosystem to identify the players and solutions likely to help them in their international development (exports, e-commerce, investment, establishment, local recruitment, dispute resolution, market watch, virtual showrooms, currency management, international payments).

F. Designing specific training programmes for the digitalisation of international trade

Higher education in international trade (techniques, management, business development) must take into account this new challenge of the digitalisation of international trade within global supply chains and between countries. This means that it is necessary to recruit professionals from the fields of logistics, trade finance and customs to provide students with practical case studies based on real-life experience. Researchers who communicate in the field of international trade should also be encouraged to publish scientific work in this area. Of course, there has been a greater number of publications on these subjects over the past decade, but very few come from French professors or researchers. The Task Force encourages academic institutions to build professional programmes on these various subjects and volunteers to identify professionals willing to take part in a library of case studies.⁷⁰

⁷⁰ Example of Master—Administration et Echanges Internationaux—International School—(Université de Paris Est—Créteil / UPEC) which provides in its “International Business” course (L3 to M2) a training course entirely in English, associating confirmed professionals and research professors, dedicated in particular to the acquisition of trade techniques (<https://aei.u-pec.fr/formations/master-administration-and-international-exchanges-parcours-international-business>)

G. Other legal issues

The Bureau for dematerialised customs formalities of the Paris Chamber of Commerce (CCIP) would very much appreciate if the Minister for Foreign Affairs could consider the possibility that its Legalisation Office accepts, in future, the use of an electronic signature instead of an original signature on source documents and on translations carried out by sworn translators, taking into account the existing technical means available.

Moreover, the Ministry for Foreign Affairs, via its Legalisation Office, is also requested to consider regulatory adaptations regarding sworn translation certifications, as these lose their original character when digitised. Thus, the process still remains in paper format from start to finish.

III. Recommendations to international organisations

A. European Union

The European Union is one of the most advanced customs unions in the dematerialisation of customs documents and formalities. However, there is still room for further progress.

In the course of the discussions and interviews carried out while preparing this book, the following main projects were identified:

- > Harmonisation at European level of the various forms, standards and documents to be attached to declarations, as they differ from country to country;
- > According to the IS manager of the DGDDI, there is currently no form of mutualisation in the IS developments of the Member States, the ideal would be to set up a connector;
- > The creation of a free European database on customs origin on the same model as the CLASS database on tariff classification;
- > The creation of a European customs valuation database on the same model as CLASS ;
- > The establishment of an interface between CLASS and RTCE, the European database on Binding Tariff Information issued in the EU.

B. WCO

WCO should push for the emergence and adoption of a uniform customs language and standards. This will enable Customs administrations worldwide to understand each other and render their systems interoperable. At the same time, WCO should also intensify its efforts to counter the emergence and strengthening of those several customs areas having different digital rules, norms and standards. Indeed, it is easier to render developing and evolving systems interoperable than to render systems already built interoperable. WCO could thus offer Member States a set of proposals for a

“common language”. To this end, WCO could certainly rely on the DSI and the ICC Customs and Trade Facilitation Commission.

WCO should intensify its advocacy efforts and thus :

- > Encourage more Member States to use the Data Model—in particular the harmonisation of the one-stop shop data. This idea links up with the previous recommendation on common language;
- > Repeat its “International Survey of Customs Administrations” to include more participants than during the pandemic;
- > Drive Member States to understand the need to invest in the digitalisation of customs as it will benefit them in the long run;
- > Reassure and encourage national customs in the use of new technologies (blockchain, drones, 5G, satellites).

On the other hand, it is essential to encourage dialogue between customs authorities and businesses. These discussions will help :

- > The realisation by customs authorities of the current and future needs of business;
- > Identification of areas where :
 - > the adoption of new technologies will facilitate customs procedures;
 - > training and material support are needed.

Being aware of these issues, WCO could act as an intermediary to facilitate and monitor these partnerships.

Moreover, due to its privileged position (as WTO’s technical support for customs matters and as the umbrella organisation for customs administrations worldwide), WCO must also continue to promote good practice in the digitalisation of international trade by presenting recent and concrete business cases.

In order to benefit from the advantages of the new technologies (speed, simplification, automation) it is necessary that Customs teams are properly trained in the use of these technologies. Therefore, WCO should integrate into its CLiCK! learning platform or its Knowledge Academy, training programmes related to these new technologies. These programmes should be available in a wider range of languages (currently mainly in English).

WCO should also promote inter-state cooperation in capacity building. Some Member States and their Customs authorities are lagging behind in several areas (knowledge, infrastructure, equipment etc.) This gap represents an additional obstacle to the interoperability of systems and the digitalisation of customs procedures.

Finally, WCO's website provides a wide range of essential information for all Customs stakeholders. However, it is still complicated to navigate and is therefore underused. It is recommended to improve the ergonomics of the site, in particular to facilitate access to the regulatory watch or to WCO's work.

c. WTO

After heated debates between industrialised and some developing countries on the subject of the digital divide and the loss of customs revenues, a compromise was finally reached on 17 June at the conclusion of the 12th WTO Ministerial Conference.

This compromise provides for the extension of the moratorium on electronic transmissions until the 13th Ministerial Conference to be held by 31 December 2023. It also provides that if the Conference is not held before 31 March 2024, the moratorium will expire on that date unless the General Council decides to extend it.

ICC France supports the request of 105 professional organisations from all over the world, including ICC, for an extension of the moratorium in the name of the digitalisation of SMEs, industry, knowledge exchange and educational services. The mobilisation will have to move to the field of independent studies, after those of UNCTAD and OECD, on the real evaluation of customs losses, compared with the quantification of the benefits in terms of growth and employment, linked to the absence of taxation of electronic transmissions.

WTO's view is that e-commerce covers all activities of production, distribution, marketing, sale or delivery of goods and services by electronic means.

Negotiations on e-commerce involving 86 countries representing more than 90% of global e-commerce have led to a consensus on a number of subjects: e-signatures, combating spam, authentication, etc. This is why it is important to safeguard this achievement at a time when we know that it will be more difficult to reconcile the positions of China, the United States and the European Union on the protection of personal data.

Vigilant monitoring of the implementation of the 2013 Trade Facilitation Agreement, with technical assistance to developing countries for all customs information system computerisation projects, is also essential. The promotion of good practice such as the recent example given by Madagascar on the adoption of ePhyto certificates allows to create a momentum by showing the investment/benefit balance for both public and private actors.

In the medium term, it is essential for the WTO to engage in ambitious negotiations in order to develop a multilateral framework that facilitates

and encourages the development of information and communication technologies for international trade, economic development, growth in trade in goods and services, and trade facilitation. This movement to adapt WTO rules of origin to the digital economy of the 21st century is all the more urgent as a growing number of bilateral or regional agreements now include provisions on e-commerce. An analysis by Wu (2017)⁷¹ shows that over the period 2001 to 2016, 69 RTAs contain provisions on digital trade and 21 RTAs include a dedicated chapter. The topics covered by these provisions are market access rules, telecommunications, digital regulatory framework, intellectual property, e-government management, cooperation and technical assistance on science and technology, electronic authentication, consumer protection, data localisation, cross-border transfer of electronic data, cybersecurity. Its conclusion is clear: “Although a significant number of WTO Members have accepted some digital trade provisions in one or more of their RTAs, there are significant problems with extending these provisions to any form of future WTO multilateral agreement”.

D. United Nations

All efforts to promote the above-mentioned model laws in jurisdictions that have not yet adopted them should be encouraged. One example is the webinar organised in September 2021 under the auspices of the Ministry of SMEs in Senegal with support from UNCITRAL and ICC on the growth opportunities offered by the digitalisation of trade documents. In general, capacity building efforts to accelerate the digitalisation of international trade actors in developing countries should be encouraged.

⁷¹ Smeets, M. (ed.). (2021). Adapting to the digital trade era: challenges and opportunities. WTO Publications. https://www.wto.org/english/res_e/publications_e/adtera_e.htm

CONCLUSION

At the end of this work on the digitalisation of international trade, a subject that is constantly evolving in many areas with regular legal reforms, the appearance of new technological solutions, or the emergence of standards facilitating interoperability in several regions of the world, we would like to focus on a few key lessons.

1. **The irreversible nature of the digital transformation:** during the various interviews conducted with companies, banks, Fintechs, international organisations, supervisory authorities and corporations, we were able to observe a real willingness to commit to a digitalisation movement that is perceived as not only unavoidable but also desirable in order to increase profitability, reliability, responsiveness and security against the risks of fraud and error. This means that the investments and strategies of the digital transformation of financial and logistical operations related to international trade in goods will necessarily be structured and will expand in the coming years.
2. **A transition that will take a long time despite an acceleration during the pandemic:** the various case studies carried out, notably the one on the bill of lading, show that it will take at least a decade, if not two, to ensure a transition to full digitisation of paper documents and procedures for all parties involved in an international trade transaction (more than ten per transaction) with legal certainty in all jurisdictions involved, and interoperability between the different systems. However, in the areas studied, progress has accelerated since 2020, due to the experiments conducted during the period of interruption of transport and trade flows with the adoption of the UNCITRAL Model Law on Transferable Electronic Documents in several jurisdictions, and the multiplication of experiments and pilot projects.
3. **A holistic transformation that requires the implementation of new cooperation mechanisms:** whether within administrations (particularly customs) or in the organisation of companies, the process of digitalising

formalities and logistics processes makes it necessary to set up cross-cutting structures to enable dialogue among information services, as well as all support professions and consumer and marketing departments. This need of cooperation and dialogue also applies to relations between international trade operators with supervisory authorities, with organisations that produce standards and norms and with start-ups that propose innovative solutions.

4. **Taking the human factor into account upstream:** the White Paper shows that the technologies are available and that decision-makers are determined to invest in digital transformation, but the human factor remains essential and can sometimes be underestimated in action plans with a strong technological component. Are employees affected by these changes already on board? Do they agree with the objectives? Were they involved in the specifications? Have they been trained to use the new tools with confidence? We believe that, in order to train the new generation of international trade professionals that France needs, such training issues deserve special consideration from both public authorities and the players within Team France Export.
5. **A key role played by the International Chamber of Commerce:** ICC's Banking Commission has developed, in a digital form, a set of rules and practices for some key trade finance instruments, including documentary credits. But this commitment has moved to another dimension with the adoption in September 2020 of the Digital Standards Initiative, which has opened up medium-term projects in the field of legal reform and the emergence of common standards. The exemplary partnership with WTO, WCO, financial institutions and regional development banks is a guarantee of success for the future while acknowledging, as OECD studies attest, that there will still be a constant increase of obstacles to the digitalisation of electronic commerce.⁷²
6. **A challenge of competitiveness between international trade hubs:** the major world maritime hubs which have the most efficient physical and immaterial infrastructures will be able to attract new volumes of maritime freight and to crystallise the main logistics flows between Asia, Europe and the United States. China is investing in automated ports with robotic handling containers based on a chain of digitised data. Singapore is also seen as a model pupil in adapting its legal framework to this new age of trade digitalisation. Among European ports, French ports are not the most advanced. A number of recent reports published in France point to the urgency of the reforms to be implemented, whereas the United Kingdom is a pioneer within the G7, now followed by Germany, in deploying the

72 Presentation by Javier Lopez Gonzales, OECD to the ICC France Board of Directors on 30 November 2021.

digitisation of international trade documents thanks to an evolution of its legal framework and a pooling of resources between the public and private sectors to test paperless maritime corridors.

7. **A necessary mobilisation of the French authorities:** the recommendations made to the French public authorities in Part Three of this White Paper concern the Directorate General of Customs, the legal department of the Ministry of Foreign Affairs, as well as the Chancellery or the Ministry of Economy and Finance, and even the Ministry of Higher Education. Among the main objectives of this White Paper are: a modification of the legal framework to transpose the model law on transferable electronic documents, speeding up the process to dematerialise customs formalities, and launching a full-scale experiment between a French port and another one in a third country. The authors of this White Paper call for the emergence and implementation of a genuine interministerial strategy for the digitalisation of foreign trade.

ICC France expresses its gratitude to all participants in the Task Force, to all those experts and representatives of the French administrations and of the European Commission who agreed to answer the questions, to share their experience and communicate their vision of the digital transformation.

Annexes



ANNEX 1

Figures and boxes

Figure 1: Trade Finance ecosystem, BCG—2015 Working Paper Embracing Digital in Trade Finance

Figure 2: The 6 components of the digital environment of the ATA e-carnet

Figure 3: Main stages in the digitalisation of trade finance 2002-2021
(Source: ICC)

Figure 4: Overview of digitisation initiatives in the field of Trade Finance

Figure 5: Comparison between the functioning of a paper letter of credit and an electronic letter of credit.

Figure 6: Summary of the Singapore/Rotterdam corridor experience with an eBL (Source: TradeTrust Newsletter issue 05 IMDA)

Box 1: Azura's testimony on the impact of the e-Phyto solution in Morocco
(Source: Global Alliance for Trade Facilitation)

Box 2: TradeLens, a powerful tool for the container transport industry

Box 3: The Paperless Trade Framework Agreement in Asia, a pioneer region in the digitalisation of international trade

Box 4: The environmental impact of the digitalisation of international trade (UNESCAP study): an important lever to be put into perspective with regard to the global emissions generated by international trade

Box 5: The example of Ambriva's solutions in the field of currency management

Box 6: On the Annex to the G7 Digital Resolution of 28 April 2021

ANNEX 2

Acronymes

AEO	Authorised economic operator
API	Application programming interface
ATA	Admission temporaire/Temporary admission (carnet)
BAFT	Bankers Association for Finance and Trade
CCI	Chamber of Commerce and Industry
CCIP	Paris Chamber of Commerce and Industry
CCIR	Regional Chamber of Commerce and Industry
CITES	Convention on International Trade in Endangered Species of Wild Fauna and Flora
CO	Certificate of origin
COREPER	Committee of the Permanent Representatives of the Governments of the Member States to the European Union
CSR	Corporate social responsibility
DGCCRF	Directorate General for Competition Policy, Consumer Affairs and Fraud Control (France)
DG Connect	Directorate-General for Communications Networks, Content and Technology (EU)
DGDDI	Directorate-General of Customs and Indirect Taxes (France)
DGITM	Directorate General for Infrastructure, Transport and the Sea (France)
DNI	Digital negotiable instrument
DOP	Document d'ordre public (Public order document)
DSI	Digital Standards Initiative (ICC)
eIDAS	Electronic Identification, Authentication and Trust Services (EU)
ERP	Enterprise resource planning
ESCE	Ecole Supérieure du Commerce Extérieur
ESW	European Single Window
ETR	Electronic transferable record(s)

EU	European Union
e-UCP	Uniform Customs and Practice for Documentary Credits for Electronic Presentation
GIE	Groupeement d'intérêt économique (economic interest group)
GUN	Guichet unique national (national single window, French national one-stop shop)
HCCH	Hague Conference on Private International Law
ICC	Chambre de Commerce Internationale (International Chamber of Commerce)
ICC France	French Committee of the International Chamber of Commerce
ITFA	International Trade and Forfeiting Association
IoT	Internet of Things
IPPC	International Plant Protection Convention
IS	Information systems
KPI	Key performance indicator
MAE	Ministry of Europe and Foreign Affairs (France)
MLETR	Model Law on Transferable Electronic Records (UNCITRAL)
POC	Proof of concept
RTA	Regional trade agreement
SAD	Single administrative document
SME	Small and middle-sized enterprise
UCC	European Union Customs Code
UN	United Nations
UNCITRAL	United Nations Commission on International Trade Law
URDG	Uniform Rules for Demand Guarantees (ICC)
URDTT	Uniform Rules for Digital Trade Transactions (ICC)
WCO	World Customs Organization
WCR	Working capital requirement

ANNEX 3

Glossary

Artificial intelligence: all the theories and techniques used to create machines capable of simulating human intelligence.

Bill of exchange: a written document in which a person, called the drawer (the supplier), instructs his debtor, called the drawee (the customer), to pay him a specified sum of money on a specified date (the due date).

Bill of lading: a document that confirms that the goods to be transported are on board the ship.

Blockchain: decentralised and secure computer technology for storing and transmitting information.

Computerisation: see Digitalisation.

Cross-border e-commerce: all transactions that are carried out digitally via a computer network (e.g. the Internet) and that result in the physical movement of goods, subject to customs formalities.

Dematerialisation: see Digitalisation.

Demurrage: compensation that the charterer has to pay to the shipowner, in a voyage charter, when the loading and/or unloading time exceeds(s) the laytime provided for in the travel contract.

Digitalisation: transposing the physical, material support of a document or a procedure to a computerised, digital and therefore non-physical, material support.

Documentary credit: subject to the rules of the ICC Uniform Customs and Practice for Documentary Credits (UCP600), the documentary credit ensures the completion and settlement of a commercial contract between an exporter and an importer. The banks of the two trading partners commit themselves on behalf of and in favour of their respective clients, which limits the risk of delivery unpaid, or goods paid for but not delivered. Once a commercial contract has been signed between an importing buyer and an exporting seller, it is up to the buyer to initiate the request for the opening of the documentary credit by contacting his bank, which in turn issues the documentary credit to its correspondent in favour of the seller who will be

paid against delivery of a set of documents agreed between the commercial parties and recognised conform.

Documentary remittance or documentary collection: this consists in the seller having a bank collect the amount owed by a buyer against the delivery of documents. The documents are handed over to the buyer only against payment or acceptance of a bill of exchange. In the latter case, the bill of exchange may be endorsed by a bank, which provides the seller (or, in the case of circulation, the bearer) with much greater security for payment. It should be noted that in the documentary remittance, banks act as agents for their clients: they undertake only to carry out their instructions.

LOI: Letter of Indemnity, first demand guarantee.

Machine learning: a field of study in artificial intelligence that uses mathematical and statistical approaches to give computers the ability to “learn” from data, i.e. to improve their performance in solving tasks without being explicitly programmed for each task.

Non-Fungible Token (NFT): a unique digital identifier that cannot be copied, substituted, or subdivided, that is recorded in a blockchain, and that is used to certify authenticity and ownership.

Openaccount: a form of inter-company credit whereby the parties to an international transaction agree to settle a sale of goods or services by transfer on a specific date without using trade finance instruments.

Platformisation: the phenomenon whereby organisations change their structures and practices to adapt and pursue their missions in a very ‘dynamic’ context.

Principal: the principal is, in the legal field, the natural or legal person who takes the initiative for an operation.

Promissory note: the promissory note belongs to the category of commercial paper: a means of payment specific to companies. In most cases, it is a written document in which the subscriber (drawer) undertakes to pay a beneficiary (drawee) an agreed sum on a date specified in advance. The promissory note is an acknowledgement of debt issued and signed by the debtor. In order to collect it, it must be handed over to a bank, which will collect it by debiting the bank account identification details notified on the document on the due date mentioned.

Release: the act whereby the customs authorities make goods available, after control, for the purposes specified in the customs procedure under which they are placed

Smart contract: computer protocol that facilitates, verifies and enforces the negotiation or execution of a contract, or that renders a contractual clause unnecessary.

Stand-by documentary credit: this documentary guarantee can be used for both import and export, and covers the company using it against the risk of non-payment on a commercial transaction, or the risk of poor or non-execution of contractual obligations.

Stand-by letter of credit: by opening a stand-by letter of credit, the importer guarantees his supplier that his bank will take his place if he defaults, provided that the exporter presents the requested documents as proof of the existence of the claim. The stand-by letter of credit is only called upon by the beneficiary if the principal has not fulfilled his obligations (i.e. the buyer has not settled his debt in time). Only in this case does the beneficiary claim payment from the bank that issued the guarantee (guarantor), presenting those documents mentioned in the text of the stand-by letter of credit.

ANNEX 4

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ANNEX 5

List of useful links

Digital Standard Initiative

<https://www.dsi.iccwbo.org/>

European Commission's website on customs and taxation

https://ec.europa.eu/taxation_customs/index_en

Customs newsletter (European Union)

https://taxation-customs.ec.europa.eu/newsletters_en

Website about e-phytos

<https://www.ephytoexchange.org/landing/hub/index.html>

Information site on customs formalities (certificate of origin, ATA carnet etc.)

<https://formalites-export.com>

La French Tech website

<https://lafrenchtech.com/fr/>

MLETR related site

https://uncitral.un.org/fr/texts/ecommerce/modellaw/electronic_transferable_records

ANNEX 6

Typology of digitisation initiatives in the field of Trade Finance

Digitisation initiative	Founders	Date of creation	Partners	Description	Area of application
Startups					
Bolero	Paul Mallon	1998	360tf, Amazon Web Services, ICC, ITFA, Tradelens etc.	Multi-bank platform specialising in transactions of Trade Finance to banks and companies that facilitate the digitalisation of international trade.	General international trade, e-cash, Supply Chain, Guarantees, Letter of Credit.
Enigio	Göran Almgren, Hans Almgren, Mats Stengard	2012	ITFA, China Systems & Finastra	Paper digitisation solution using blockchain technology.	General international trade.
Wave	Serie A: Zim & Maersk line	2015	ZIM Integrated Shipping Services	Blockchain platform to transfer and manage electronically encrypted and authenticated trade documents between the different parties.	Electronic version of trade documents, including the bill of lading.
CargoX	Initial Coin Offering	2017	China Systems, Freithalia, Manuchar, Fracht, GCA etc.	Public blockchain platform allowing to transfer in a encrypted property titles and other documents, and to transfer ownership of these documents.	Electronic version of trade documents, including the bill of lading.

Digitisation initiative	Founders	Date of creation	Partners	Description	Area of application
MarcoPolo	TradelX & R3 Corda Bank consortium : Crédit Agricole, ING, Commerzbank, Standard chartered, BNPP, Natwest, SMBC, DNB, Anglo-Gulf bank, Landesbank Baden-Württemberg	2017	Commerzbank, Crédit Agricole, ING, Mastercard, Microsoft, Mitsui&Co, Türkiye Bankasi, etc.	<p>Marco Polo is a network, using Blockchain (Corda R3) that connects banks, businesses and third-party service providers to perform working capital and trade finance activities.</p> <p>This Corda R3 blockchain is integrated with the TradelX platform and with the ERP systems of companies with APIs.</p>	<p>Open account (receivables discounting and factoring, receivables financing)</p> <p>Payment commitment and financing</p> <p>Distribution of commercial assets, funded and unfunded risk participation.</p>
We.Trade ⁷³	IBM + 8 Banks consortium : Deutsche Bank, HSBC, KBC, Natixis (a cédés parts), Rabobank, Société Générale, UniCredit Italy, UniCredit Germany, Santander	2017	<p>Entry of Akbank, Kommerzni Banka, Ceska, CSOB, CBC and consortium enlargement: Nordea, UBS, Caixa, Erste Bank</p> <p>Entry of CRIF in the capital</p>	<p>Blockchain platform for buyers, sellers and their bank to manage the buying/ selling process from start to finish in a simple and secure way.</p> <p>The platform also allows you to request a financial guarantee or pre-financing.</p>	Automatic conditional payments on fulfilment of transaction conditions.
TradeLens	IBM & Maersk	2018	CMA-CGM	End-to-end digital solution that provides shippers, cargo owners and freight forwarders with a streamlined and secure process for the issuance, transfer and the submission of the original bills of lading.	Maritime transport. Takes the UN/ CEFACT model as standard.

⁷³ as we.trade ceased its activities on 1 July 2022, the platform will continue to process transactions until they are completed in accordance with its commitments to its customers

Initiative de digitalisation	Fondateurs	Date de création	Partenaires	Description	Domaine d'application
International organisations					
e-UCP (Uniform Customs and Practice for Documentary Credit for Electronic Presentation)	ICC	2002 (v. 1.0) 2019 (v. 2.0)		Encourage the electronic presentation of documents within the framework of an already codified body of rules (UCP 600—Rules and Uniform Customs Practices for Documentary Credits).	
e-certificate of origin	World Federation of Chambers of Commerce	2012		Non-preferential (universal) certificates of origin issued by the CCI.	Transport of goods.
e-carnet ATA	ICC	2016	World Customs Organisation	Temporary admission carnets for duty-free goods.	Transport of goods.
Model Law on Electronic Transferable Records (MLETR)	UNCITRAL, the United Nations Commission on International Trade Law	2017	Bahrain, Singapore and Abu Dhabi Global Market	The MLETR enables the legal use of electronic documents both nationally and internationally.	Bill of lading, bills of exchange, promissory notes, warehouse receipts
Trade Finance Distribution Initiative	André Casterman	2018	ITFA, ICC, World Open Account etc.	This initiative aims to make the global transport of goods more efficient (faster and cheaper).	Transport of goods.
Digital Container Shipping Association (DCSA)	MSC, Maersk, CMA CGM, Hapag-Lloyd, ONE, Evergreen, Yang Ming, HMM and ZIM	2019		Creates digital standards for the most important and urgent needs of the industry (e.g. T&T, eBL) and make them freely available to all.	Focuses solely on container transport.
e-URC (Electronic Presentation for Collections)	ICC	2019		Same objective as e-UCP for documentary remittances, themselves framed by the UCP 522.	Customs and general international trade.
Digital Negotiable Instrument (DNI)	ITFA	2020	China Systems & Finastra	The objective of the DNI is to digitise bills of exchange and promissory notes.	Bills of exchange, promissory notes

Initiative de digitalisation	Fondateurs	Date de création	Partenaires	Description	Domaine d'application
Digital Standards Initiative (DSI)	ICC, Entreprise Singapore, Asian Development Bank (ADB)	2020	ICC, ADB, EDB Singapore, Enterprise Singapore	Initiative with the objective of the establishment of a digitised and globally harmonised business environment.	General international trade.
Uniform Rules for Digital Trade Transactions (URDTT)	ICC	2021		A set of general rules within which other rulebooks may coexist (e.g. UNCITRAL-type laws, MLETR, ML Electronic Commerce, ML Electronic Signature) and the transaction can be documented.	General international trade.
National public authorities					
Electronic Phytosanitary Certificate	Customs France	2021	IPPC	Certificate on the phytosanitary status of plants or plant products intended for export or re-export.	Trade in plants, plant products.

ANNEX 7

Examples of transposition of the Model Law on Transferable Electronic Documents (MLETR) and national legal frameworks favourable to the digitisation of international trade documents

Recognition of the legal validity of e-Bill of Lading in the United States

Under New York State law, electronic records of business agreements and transactions are legally valid and legally binding; these include bills of lading and other electronic documents of title as defined in the Uniform Commercial Code (UCC). Thus, bills of lading, dock warrants, warehouse receipts are documents of title (UCC §1- 201(b)). In addition, a federal decree on the Global and National Trade Act provides for a general principle of validity, effectiveness, and enforceability for electronic contracts and documents (ESIGN Commerce Act). It is also provided that the holder may be a person controlling an electronic negotiable document of title, and the Act also provides for clarification of what constitutes control.

In Germany, a clause in the Commercial Code but not effective

In 2013, a law reforming Chapter 5 dedicated to transport by sea of the Commercial Code added a section dedicated to the format of bills of lading. This section 516 is based on the principle of functional equivalence and reads as follows:

Bill of lading format: authorisation to issue statutory instruments

- (1) The carrier claims to sign the bill of lading: reproductions of personal signatures by printing or stamping will suffice
- (2) An electronic document having the same functions as a bill of lading will be considered equivalent to a bill of lading provided that the authenticity and integrity of the electronic document is assured (electronic bill of lading)
- (3) The Federal Ministry of Justice is hereby empowered to determine the regulations, issued with the consent of the Federal Ministry of the Interior and without the need for approval by the Federal Council (Bundesrat), on the details of issuance, presentation, and of transmission of an electronic bill of lading, as well as the modalities for posting retroactive entries on an electronic bill of lading.

However, this implementing legislation has not been adopted yet, which means that users are left to develop their own systems, to ensure the authenticity and integrity of the electronic bill of lading and its transfer (source: ICC Germany document) and to bear the risk of having their legal validity challenged.

In Spain, the law 14/2014 on maritime navigation recognises the eBL

A bill of lading may be issued in electronic form where this has been agreed in writing between the shipper and the carrier prior to the shipment of the goods.

The agreement between the shipper and the carrier determines (i) the regime for the issuance and circulation of the bill of exchange; (ii) the system guaranteeing the security of the medium and the intangibility of the contents; (iii) the means of authenticating the bearer of the bill of exchange; (iv) the means of recording the delivery of the goods; and (v) the means to prove the loss of validity or effectiveness of the bill.

A paper bill of lading may be replaced and cancelled by a computer bill of lading after prior written agreement between the legitimate holder of the bill of lading and the carrier.

The electronic bill of lading is subject to the same regime and has the same effects as the conventional paper bill of lading.

The adoption of the Electronic Transactions Bill in Singapore

On 1 February 2021, the Singapore Parliament passed the Electronic Transactions (Amendment) Bill. This Bill adopts the MLETR with certain amendments. The Bill therefore allows for the creation and use of an electronic bill of lading which is now legally equivalent to a paper bill of lading.

Abu Dhabi's adoption of Electronic Transaction Regulations in 2021

On 28 February 2021, the Abu Dhabi Global Market (ADGM) promulgated its Electronic Transactions Regulations 2021 which confirms that, just as traditional non-electronic (paper) versions, electronic signatures, contracts, records and documents are also legally enforceable in ADGM. The ADGM chose to rely on the MLETR for this purpose, and became the third jurisdiction in the world to enact legislation that allows the use of transferable documents and instruments, such as promissory notes and cheques, in electronic form. ITFA was delighted to engage with ADGM on this front and, following this successful experience, ITFA and ADGM have defined a broader engagement leading to the signing of a partnership on digital

business transformation with the aim of maximising the benefits of the new regulation for banks and businesses based in Abu Dhabi.⁷⁴

The UK and its future Bill of electronic exchange

Following discussions with trade professionals and the UK *Trade Finance* who had highlighted in a study the considerable benefits of adapting UK law to the UNCITRAL Model Law on Transferable Electronic Documents, the Law Commission published in April 2021 a consultation paper and a legislative reform project regarding electronic business documents.

On 16 March 2022, following the consultation process, the Law Commission published and tabled its revised recommendations and draft legislation in Parliament.

The Queen's Speech, delivered on 10 May by Prince Charles, set out the government's legislative programme for the next parliamentary session. Among the 38 bills announced was the Electronic Commercial Documents Bill.

The aim of the bill is to "put electronic business documents on the same legal footing as paper documents, eliminating the need for unnecessary paperwork and bureaucracy. Unlike the case of tangible assets, the current law in England and Wales does not recognise the possibility of owning intangible assets such as electronic documents. The proposed bill sets out the 'gateway criteria' that an electronic document must meet to qualify as an 'electronic business record'."

These criteria are as follows:

- > The electronic document must be capable of being controlled exclusively in order to avoid double spending. Only one person or entity must be able to exercise control over the electronic document at any one time;
- > The electronic record should be fully assigned on transfer and the transferor should no longer be able to exercise control over the record on transfer;
- > A reliable system should be used to ensure that the criteria are met.

74 Interview with André Casterman (Casterman Advisory)

ANNEX 8

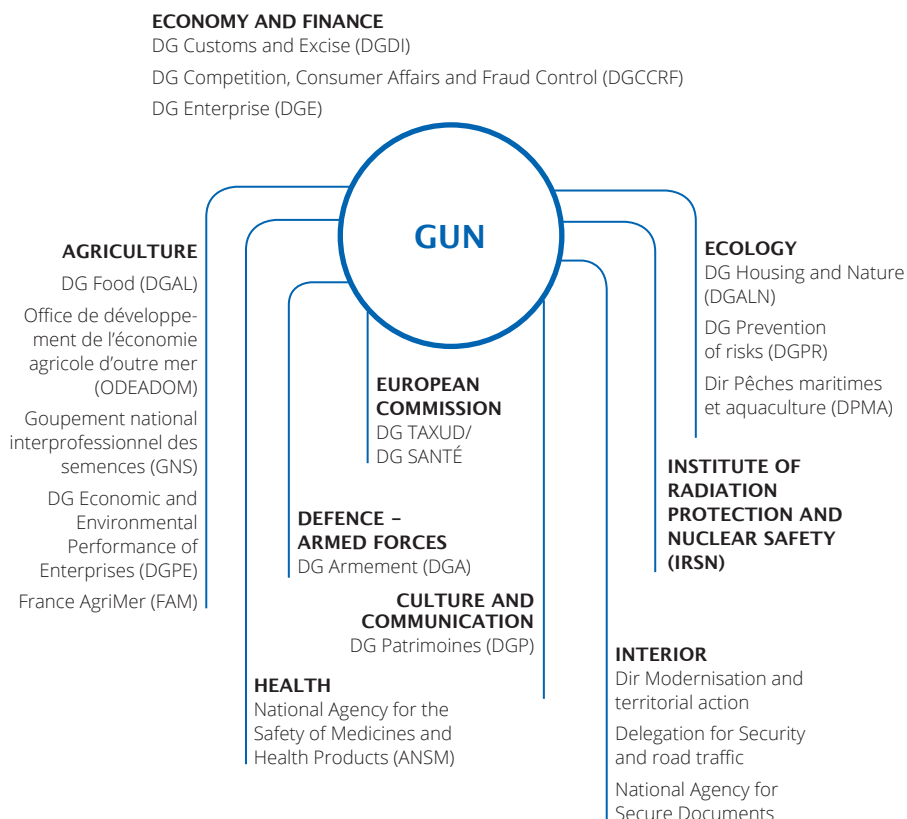
List of projects of the Global Alliance for Trade Facilitation on the digitisation of one or more processes and/or documents

Pays	Objectif	Projet
ECUADOR	Modernising formalities to improve the quality of efficiency and competitiveness	> Extension of the one-stop shop through integration of 10 new services (and improved management systems of the two main sanitary and phytosanitary agencies, ARCSA et AGROCALIDAD)
GUATEMALA in progress	Remedy cumbersome administrative port procedures to strengthen trade competitiveness	> Implementation of an automated system to manage entry and exit of ships, and of an e-portal containing information on all relevant documents
TUNISIA in progress	Simplify the processes of customs clearance for Tunisian agricultural exporters	> Digitalising control procedures in Export
SENEGAL in progress	Digitise processes for import of seeds and plant products for the benefit of local businesses	> Digitisation and integration of the pre-shipment authorisation into the one-stop-shop > Removal of the shipment's official report physical transfer between the plant protection department and customs via integration into the one-stop-shop
MOROCCO in progress	Optimising port operations by improving data exchange	> Implementation of an ePort solution allowing the electronic exchange of truck movement data within the Port of Casablanca
MOZAMBIQUE in progress	Accélérer la fourniture de produits médicaux essentiels	> Digitisation and simplification of processes (in particular the authorisation to ship medical products)

ANNEX 9

The example of the Guichet Unique National (GUN) in France

The GUN (French national single window) is a computerised system for the automatic and instantaneous control of public order documents required for the completion of customs formalities. This initiative tends to be duplicated in the European Union. It is also cited as an example in the work of the WCO, which has made the dematerialisation of documents attached to customs declarations one of its priorities.



The proposed solution aims at addressing the costs and delays for traders and operational customs services caused by the production of paper-based Public Order Documents (DOP), see their visas, issued by some fifteen

administrations in application of national, European and international (CITES) regulations, which are essential for customs clearance.

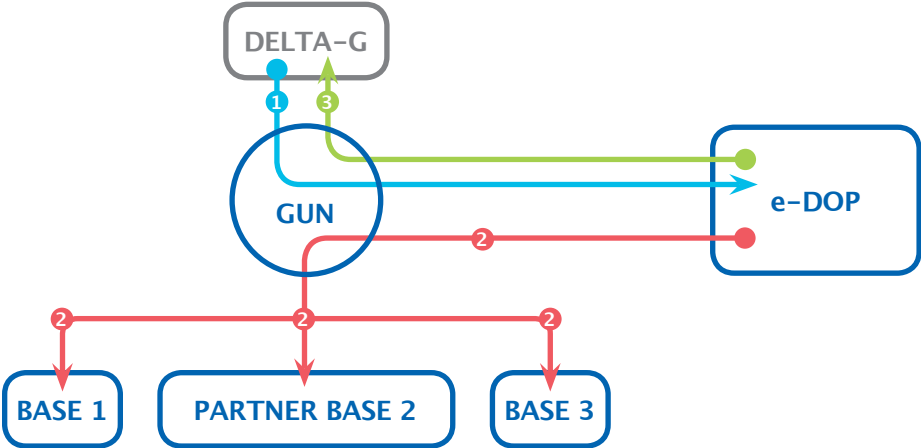
Declarants must use software that complies with the latest EDI schemes published by Customs (Annex x). Fifteen partners are involved in this flagship administrative simplification project:

Points for improvement

The interest of the GUN lies in the size of the interministerial network. By end 2022, the following links being active: GUN, and DELTA-G with i-CITES, the IS of the *Groupement des semences et plants*, RCE (FranceAgriMer), SIGIS (*Institut de radioprotection et de sûreté nucléaire*), EGIDE (the IS of the Service of dual-use goods), SORAFSL (DGCCRF), CALAO (Importations of agricultural products in overseas departments—IS of ODEADOM). The next planned deployment concerns the GUN interconnection with SIGALE (the information system of the Directorate General for Armaments), which is due to enter the test phase shortly, while the DGDDI is also planning to implement a GUN interconnection between DELTA and CERTEX (the IS of the European Commission's Directorate-General for Taxation and Customs, DG-TAXUD), enabling the fully automated and dematerialised processing of imports of products subject to sanitary and phytosanitary regulations.

The first webservice automates the consistency checks between the customs declaration and the DOP it requires. These checks are performed in real time.

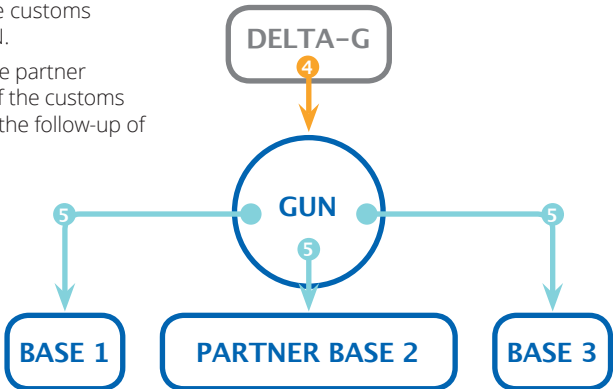
In the event of non-compliance, the declarant receives an error message on his interface (DELTA-G via douane.gouv.fr or on his EDI).



- 1 DELTA-G sends to the GUN the data of the customs declaration to be subject to an automated control. They are identified by a document code in box 44 of the customs declaration.
- 2 GUN sends a request to the partner database. In return, the partner database provides GUN with the Public Order Document (DOP) data required for the automatic consistency checks carried out by an e-DOP control module linked to GUN.
- 3 The e-DOP control module compares the data in the DOP with the data in the customs declaration and sends the results of the control to DELTA-G via GUN.

The second web service enables the transmission of data from DELTA-G to the partner database, which manages imputations (on the DOP) of the quantities or even values cleared through customs.

- 4 DELTA transmits the customs declarations to GUN.
- 5 GUN transmits to the partner database the data of the customs declaration to allow the follow-up of the imputations.



ANNEX 11

The DELTA system

In 2007, the Directorate General of Customs and Indirect Taxation introduced the DELT@ (Customs Clearance Online by Automated Processing) procedure to dematerialise customs procedures. Since then, all customs declarations have been submitted electronically.

With the introduction of the Union Customs Code (UCC) in 2016, we no longer speak of the DELTA D and DELTA C procedures but rather of DELTA G, the single remote customs clearance procedure that allows traders to complete their import and/or export formalities.

> **DELTA X**

Concerns express shipments replaced by Delta H7

> **DELTA P**

Customs procedure used for the port and airport handling of goods.

> **DELTA T**

Customs procedure for transit operations

French Customs is currently working on the redesign of the DELTA G/X systems so that they can be used in the context of the centralised customs clearance at European level (possibility of presenting goods in Antwerp while filing the customs declaration with Lyon customs, for example).

The new system, called DELTA IE (for import-export), should be operational for imports from 1 January 2023 (for simple customs clearance or 'release for free circulation'). It will then be generalised by 2025.

ANNEX 12

G7 Digital Ministers' Track —Annex 2⁷⁶**Principles for domestic legal frameworks to promote the use of electronic transferable records**

In the 2021 G7 Digital and Technology Ministerial Declaration, we recognized that paper-based transactions, which still dominate international trade, are a source of cost, delay, inefficiency, fraud, error, and environmental impact. We affirmed our shared view that, by enabling businesses to use electronic transferable records (ETRs), we will generate efficiencies and economic savings that will strengthen the resilience of our global economic system and facilitate trade recovery across the G7.

We value the work of the United Nations Commission on International Trade Law (UNCITRAL) on ETRs. We support the principles proposed by our experts, as laid out below, which complement and are consistent with this work. The principles should serve as guidance for the adoption or review of domestic legal frameworks to promote the use of ETRs. They aim to ensure that legal frameworks remain easily applicable as technology develops and do not require early adjustment. We support the adoption of domestic legal frameworks that are consistent with the UNCITRAL Model Law on Electronic Transferable Records (MLETR) and with these principles.

Legal clarity

Legal frameworks should be clear and unambiguous to ensure that all parties understand the requirements with which they need to comply and are able to design the technical systems needed to create, process and exchange ETRs accordingly, which requires substantial investments. Relevant provisions from the MLETR include, for example, reliability, singularity, and exclusive control over ETRs.

Technological neutrality

Legal frameworks should use technologically neutral terminology that provides flexibility to the parties, while remaining applicable to technologies developed in the future. Legal frameworks should avoid prescribing or

⁷⁶ Annex 2 of the Ministerial Declaration after the G7 Digital Ministers' meeting of 10-11 May 2022 in Düsseldorf

favouring a specific technology, as this could undermine innovation and not reflect commercial needs and practices.

Functional equivalence and non-discrimination

Legal frameworks should allow ETRs that perform the same functions as their paper equivalents to enjoy the same level of legal recognition.

Interoperability

Interoperability of the technical systems needed to create, process and exchange ETRs can facilitate their widespread and cost-effective use. Interoperability will prevent lock-in and enhance the range of services from which businesses may be able to choose, including services tailored to the needs of SMEs. It will also have a positive impact on competition among providers of such services. Ultimately, interoperability will further support the creation of a dynamic market for ETRs, because it would provide confidence in the reliability of platforms.

Global acceptance

Legal frameworks should accept ETRs regardless of whether they have been created, processed or exchanged domestically or abroad – as long as the creation, processing or exchange meets the applicable substantive requirements. Legal frameworks that deny the legal validity of “foreign” ETRs on the sole ground that they were created, processed or exchanged abroad, would significantly impede international trade and severely limit the benefits of switching from paper to ETRs.

Transparency and stakeholder engagement

Legal frameworks should be developed in consultation with relevant stakeholders. Drafts should be published for commenting.

Notes