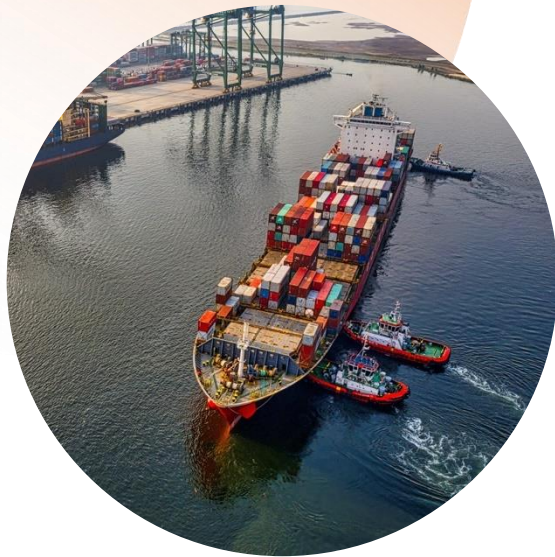


# Transform The Way You Trade

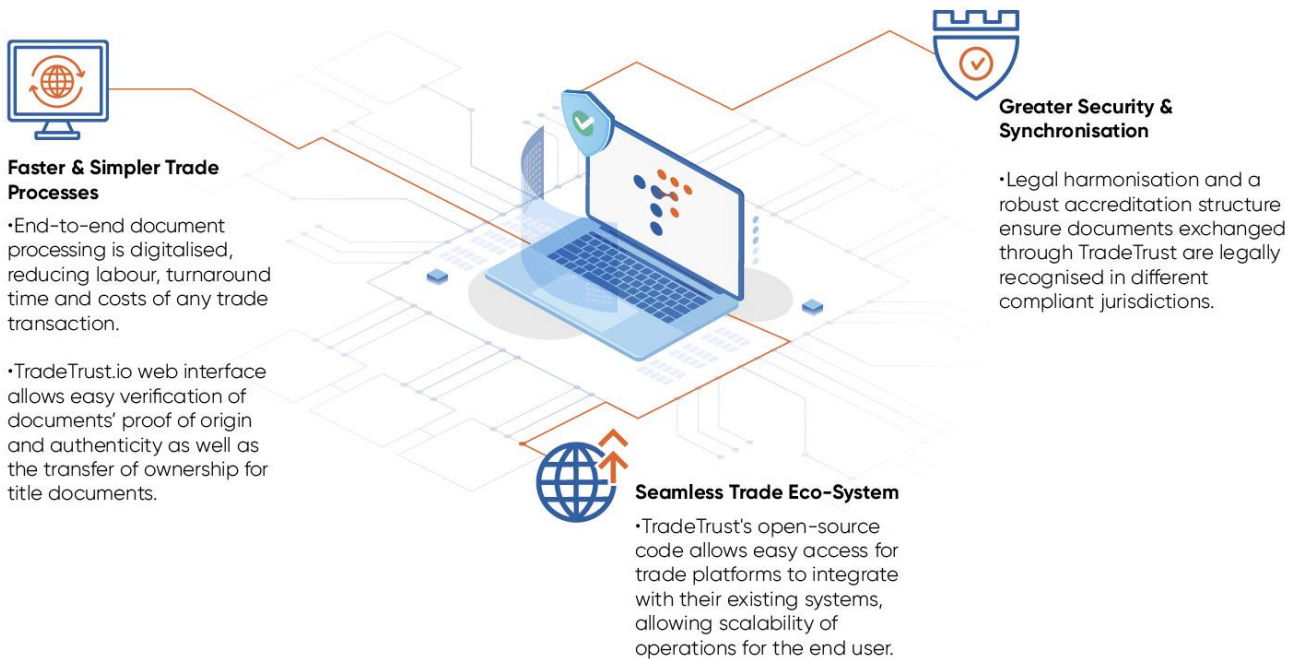


The current trade ecosystem is heavily reliant on physical paper documents and signatures to provide proof of originality and ownership<sup>1</sup>. However, this method is slow, inefficient, labour intensive and prone to fraud.

Although digitalisation efforts have been made, most of these attempts have had limited results owing to siloed networks that do not communicate with one another.

Developed and pioneered by Singapore’s Infocomm Media Development Authority (IMDA), TradeTrust was designed to address the challenges of paper-based international trade, reduces costs of documentation and risks of fraud.

Leveraging international standards and frameworks, TradeTrust supports the digitalisation of trade documents into two broad categories, Verifiable Documents<sup>2</sup> and Transferable Documents<sup>3</sup>. The digitalisation of Transferable Documents into Electronic Transferable Records (ETRs) is supported by open-source software that utilises blockchain technology. TradeTrust enables governments and businesses to verify the authenticity and provenance of documents and effect title transfer across digital platforms seamlessly, thus achieving end-to-end digital processing of trade documents.



TradeTrust reduces document processing times and costs, as well as risks of fraud.

### PROCESSING TIME

**Manual Paper-based**  
5 – 10 Days

**With TradeTrust**  
> **Less than 24 Hours**

<sup>1</sup> <https://www.mckinsey.com/industries/travel-logistics-and-infrastructure/our-insights/the-multi-billion-dollar-paper-jam-unlocking-trade-by-digitalizing-documentation>

<sup>2</sup> Verifiable Documents such as Certificate of Origin, Packing Lists

<sup>3</sup> Transferable Documents or Electronic Transferable Records (ETRs) such as electronic Bill of Lading(eBL)

## Who benefits from TradeTrust?



### Trade & Logistics Players

Processing of transferable documents, such as electronic Bills of Lading (eBLs), can be completed within 24 hours, improving supply chain efficiency and lowering operational costs.



### Border Control/Port Authorities

TradeTrust-verified documents adhere to global standards and meet the legal requirements of different legislations. This **enhanced efficiency and security** reduces the time needed for document processing.



### Tech Service Providers

Open-source software that allows for easy adoption provides **opportunities for innovation, automation and new business models.**



### Financial Institutions, Financiers & Insurers

TradeTrust transferable documents are **legally recognised as documents of title** under statutory law in compliant jurisdictions.



### Government Bodies

Help countries improve their trade processes by easy adoption of TradeTrust's open-source software across industries and organisations. This creates **opportunities to conduct faster, simpler and more secure trade processes and transactions** with other nations and jurisdictions.



### Organisations involved in Global Trade

Utilising TradeTrust's globally compliant rules and policies, organisations can **trade with greater efficiency and legal certainty.**

## How to get started

Users can get started in 2 quick ways:

- 01 Incorporate TradeTrust's source into existing application software: [github.com/TradeTrust](https://github.com/TradeTrust)
- 02 Verify digital trade documents using: [TradeTrust.io/verify](https://TradeTrust.io/verify)

For more tools and resources to facilitate your integration of TradeTrust into existing application software check out [dev.tradetrust.io/learn](https://dev.tradetrust.io/learn)

For more information on TradeTrust, please visit [TradeTrust.io](https://TradeTrust.io) or email [tradetrust@imda.gov.sg](mailto:tradetrust@imda.gov.sg)



### END-USERS

#### Trade & Logistics Players

##### Increased efficiency & security of processes

- By digitalising the document verification process and ensuring the legal validity of the documents, TradeTrust greatly reduces the time needed for validation and manual checks from 6 to 10 days to less than 24 hours with the electronic Bill of Lading (eBL).

##### Higher cost savings

- Digitalising paper documents eliminates overhead costs such as printing, handling, and shipping of typically hundreds of pages amongst numerous parties for only a single shipment of cargo<sup>1</sup>.
- Additionally, digitally transferring documents is efficient and not limited by any physical or geographical limitations. Documents can be processed before the goods arrive at the port of destination. This significantly reduces the costs of holding cargo in the event that these documents have not been cleared.
- Potentially lower lending rates from financial institutions as TradeTrust-verified documents carry lower risks of fraud.

##### High user adoption rate potential

- TradeTrust's interoperability feature allows for easy integration of its open-source software into users' existing digital systems.



#### Financial Institutions, Financiers & Insurers

##### Seamless and safer financing processes

- Through TradeTrust's accreditation structure comprising of globally-accepted rules and policies, the integrity and consistency of the digital verification process are maintained.

##### TradeTrust-verified documentations are legally recognised as documents of title under statutory law in compliant jurisdictions

- The digital verification process lowers the risks of fraud and eliminates the need for repetitive checks by various parties, creating a smooth and secure transaction experience. Trade financing banks can obtain collateral security over the eBL, allowing them to obtain regulatory capital relief and pass on cost savings to clients.
- Other parties can also benefit from the digitalisation of payment processes as funds are released through digital contracts once the documents are verified.



#### Technology Service Providers/ Developers

##### Easy integration into existing or future systems being developed

- TradeTrust's interoperability feature allows easy integration of its open-sourced software into existing digital systems, benefiting TSPs' users as they now have the option of portability.

##### Opportunities for New Digital Services

- By connecting with users in the international trade ecosystem, TSPs' users have more opportunities to develop new digital services that are essential for the industry to be built upon TradeTrust's open-source software.



## Border Control Agencies / Port Authorities

**More consistent, time- and cost-efficient way of transferring data between agencies and their counterparties across borders.**

- As TradeTrust generates verifiable documents that follow globally-harmonised standards, it allows easy and quick adoption between agencies and across borders.

## PARTNERS



## Organisations Involved in International Trade

**Greater trust and legal certainty through TradeTrust's accreditation structure**

- Comprising globally-accepted rules and policies, TradeTrust's integrity and consistency of the digital verification process are maintained.
- This lowers the risks of fraud that might disrupt the flow of processes and goods within the ecosystem and can be used by organisations worldwide to align on.

**A more progressive trade ecosystem**

- Its open-source software enables businesses all around the world to easily integrate digitalisation into their trade documentation process. With the digitalisation of international trade activities, it creates more opportunities for trade and commerce on the global stage with the potential to transform the future of commerce and international trade.

## Government Bodies



**TradeTrust's open-source software allows for easy adoption and access by businesses and organisations worldwide, creating new opportunities for governments to foster more trade relationships with other countries.**

- Greater trust and legal certainty through its legal harmonisation and standards agreements which can be used by organisations worldwide to align on.
- Its fully digital nature also encourages businesses to move away from inefficient traditional methods, driving business continuity and resilience of the trade ecosystem amidst global disruptions.

## Annex B: TradeTrust Key Milestones

### 2019

#### **January: TradeTrust's first MOU**

A Memorandum of Understanding (MOU) was signed between Maritime Port Authority (MPA), Singapore Customs (SC), Singapore Shipping Association (SSA) and IMDA, affirming their support for the initiative.

#### **March: Launch of TradeTrust**

An innovative move away from paper-based documentation processes.

#### **November: First TradeTrust Transaction**

The successful trial, involving partners such as the International Chamber of Commerce (ICC), DBS bank, Transfigura, Perlin Network and IMDA, witnessed a significant reduction in processing time by more than half, from 45 to 20 days.

#### **December: TradeTrust Challenge**

Held during Singapore FinTech Festival, the challenge saw six award winning proposals of applications designed to facilitate trade digitalisation using TradeTrust.

### 2020

#### **January: Partnership with ICC and 17 industry firms**

The collaboration was formalised through a Memorandum of Intent (MOI) that was signed to kickstart the adoption of digital technologies within the trade ecosystem.

#### **October: Partnership with SWIFT**

The collaboration with global financial messaging network, SWIFT, was a key driver of international trade digitalisation, connecting TradeTrust framework to SWIFT's community of over 11,000 financial institutions.

### 2021

#### **January: IMDA-MPA Collaboration**

The pair oversaw the successful completion of Singapore-Rotterdam pilot where 2 major transshipment ports conducted a shipment using an electronic Bill of Lading (eBL).

#### **March: Singapore Electronic Transaction Act (Revised)**

The ETA amendment adopts MLETR with modifications, enabling the creation and use of legally-recognised eBLs.

#### **August: First cross-border trade documentation e-transaction between 2 countries**

The exchange of documents was conducted between Australian Border Force (ABF), Singapore Customs and IMDA, where the use of digital Certificates of Origins (COOs) was approved.

#### **October: Successful completion of 3 industry-led digital trade financing pilots**

Under the Singapore-China (Shenzhen) Smart City Initiative, UOB along with its Shenzhen branch and their clients have effectively concluded two trials in September. The third trial was completed by DBS Singapore, DBS China and its client.

#### **November: World's first digital trade financing pilot between 2 MLETR-harmonised jurisdictions**

Following the successfully concluded pilot between IMDA, the Monetary Authority of Singapore (MAS) and the Financial Services Regulatory Authority (FSRA) of Abu Dhabi Global Market (ADGM), suitable systems and trade platforms can be used for live shipments of goods between United Arab Emirates & Singapore.

# 2022

## **April: Singapore-China Yangtze River Delta (Zhejiang) Joint Innovation Call Programme**

Singapore-Zhejiang Economic Trade Council (SZETC) Pilot, a consortium of 9 companies from Zhejiang and Singapore) were formed to conduct digital trade financing pilots.

## **July: TradeTrust as recommended solution in UNECE UN/CEFACT White Paper**

The eData Verifiable Credentials for Cross-Border Trade White Paper publication describes a highly scalable operating model for digitisation and trust of cross border trade based on verifiable credentials, linked data, and decentralised identifier with TradeTrust implementation guidance.

## **August: Winner of APTFF Innovation Award**

One of the winners of the 2022 Trade Facilitation Innovation Award at the 10th Asia Pacific Trade Facilitation Forum (APTFF) which recognises TradeTrust's innovative approach to trade facilitation and in alignment with the goals of the 2030 United Nations sustainable development agenda.

## **December: TradeTrust on Polygon**

TradeTrust on Polygon and refactored our Token Registry codes for up to 92% estimated cost savings.

### **TradeTrust featured by international organisations:**

- ICC and WTO: ICC DSI and WTO's Standards Toolkit for Paperless Trade
- WTO/WCO Report on Disruptive Technologies (2022)
- WTO-WEF TradeTech Report (2022)

# 2023

## **January: Open Attestation registered as a Digital Public Good<sup>4</sup>**

Singapore developed OpenAttestation (<https://www.openattestation.com/>) enables documents issued with this technology to be cryptographically trustworthy and able to be verified independently. OpenAttestation provides the technology underpinnings of TradeTrust and is registered as a Digital Public Good (DPG), an open-source software made publicly accessible that people can modify, share and reuse.

## **February: World's First Live Electronic Transferable Record (ETR) Cross-border Trade, supported by Statutory Law Framework**

The pilot demonstrated the use of TradeTrust for the issuance, ownership title transfer and surrender of the ETR as an eBL between the stakeholders. Its interoperability across different platforms and applications provides an ease of portability. The eBL was legally supported solely by statutory law without the use of any contract law or rulebook. This shipment showed that an eBL issued using the TradeTrust framework can be used in a non-MLETR jurisdiction (i.e. Thailand).

## **March: WSIS GovStack Digital Service Design Special Prize - Finalist**

The WSIS Digital Service Design Special Prize was developed to recognize governments around the world using Digital public infrastructure systems (DPIs) and a whole-of-government approach to Citizen-Centric Digital Service Design to achieve the 2030 Sustainability Development Goals (SDGs).

## **August: Kicking off an Era on Interoperable eBLs for Trade Finance**

The world's first live transaction involving an interoperable eBL backed Letter of Credit transaction showcased the digitalisation of cross-border trade financing documentation can be applied across different systems and platforms and demonstrated the real-world applicability of the G20 High-Level Principles on Digitalisation of Trade Documents.

## **September: TradeTrust as an Example of MLETR Compliant Title Transfers In UNECE UN/CEFACT White Paper**

The transfer of Model Law on Electronic Transferable Records-Compliant Titles White Paper explains the key requirements laid out in MLETR that an electronic record must satisfy to be an ETR so that its legal validity is preserved even when used across international borders with TradeTrust as an example of technical guidance.

## **September: SDG GameChangers Award Runner-Up (Category 4 - Prosperity: Promoting Economic Growth)**

The SDG Digital GameChangers Awards honours Individuals and organisations utilising digital technologies towards rescuing the Sustainable Development Goals (SDGs) - the 17 "Global Goals" set out by the United Nations to address the world's most urgent environmental and socio-economic challenges.

<sup>4</sup> <https://digitalpublicgoods.net/digital-public-goods/>

## 2023

### **October: First Cross-Border Paperless Trade between China and Singapore powered by IMDA's TradeTrust and Beijing's AEOTradeChain Successfully Piloted**

The trial demonstrated the use of TradeTrust framework to facilitate end-to-end digitally processed maritime shipment involving the use of an electronic Bill of Lading transacted across different business systems in a decentralized manner. It is estimated that the document-processing efficiency was improved by over 80%, and the business operation cost reduced by over 30% through the digitalisation of the shipping and export processes.

## Annex C: TradeTrust – Successful Trials

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# 01

### Singapore-Rotterdam Trial Using Electronic Bills Of Lading (eBL)

In January 2021, Singapore and Rotterdam (2 major transshipment ports along the Europe-Far East trade lane) completed a trial shipment using electronic Bills of Lading (eBL). The trial demonstrated the efficiency and efficacy of TradeTrust’s information integration capability where eBLs issued by one platform can be easily verified and processed by another digital trade platform.

In this trial, two different platforms, the Singapore-based DLT Ledgers’ blockchain platform and the Netherlands-based NaviPorta platform, were used to perform the title transfer and thereafter the surrender of the eBL through TradeTrust.

PoR Authority also highlighted that their “industry partners Ocean Network Express (ONE) and Olam were able to cut end-to-end documentation processing time from an average of 5 to 10 days, using hard copy documents, to less than 24 hours, using the eBL for the digital transfer of ownership.”<sup>5</sup>

# 02

### Industry Led eBL Trial By Mitsui & Co Asia Pacific

Mitsui & Co (Asia Pacific) Pte Ltd., the regional headquarters for global trading and investment company Mitsui & Co., LTD., leveraged on TradeTrust’s framework to use eBL. With support from DLT Ledgers and IMDA, Mitsui successfully completed a trial using eBL for food shipments imported to Singapore from Thailand.

Yoshihumi Kotsuka, General Manager of Mitsui & Co. Asia Pacific’s Logistics Strategy Department who also spoke positively of the regulatory environment and the untapped potential for the local digital economy, highlighted: “There is a growing need for us to facilitate electronic transactions for greater efficiency, convenience, and to strengthen our trade competitiveness. Here in Singapore, we have all the essential ‘digital players’, such fast logistics service providers, financial institutions and technology companies all in the one place, which makes a conducive environment to promote the digitalisation of trade.”<sup>6</sup>

# 03

### First Cross-Border Digital Trade Documentation Between Singapore and Australia

In August 2021, Singapore saw its very first cross-border digital trade documentation transaction between multiple governmental agencies from two countries - Australian Border Force (ABF), the Infocomm Media Development Authority of Singapore (IMDA), and Singapore Customs (SC), a regulatory authority, along with other industry participants. The transaction accepted the verifiable digital Certification of Origins (COOs), which led to the instant authentication and efficient processing of the trade documents during the trial.<sup>7</sup>

ABF Commissioner Michael Outram expressed that he was pleased with the positive results as “digital verification and verifiable documents show promise as a ‘circuit-breaker’ to disrupt persistent paper-based evidence required by authorities,” bringing significant improvements for the Australian trading community. With ABF’s role as a pioneer in Australia’s cutting-edge digital verification projects, this partnership will further amplify the impact of TradeTrust’s push towards global trade digitalisation.

# 04

### Completion Of Three Industry-Led Trade Financing Pilots

The Singapore-China (Shenzhen) Smart City Initiative saw the successful completion of three digital trade financing trials, which strongly demonstrated how key maritime trade documents like the eBL could be used across different trade financing platforms and jurisdictions. The first two transactions were completed by Singapore-based UOB together with its Shenzhen branch and their clients in September 2021. The third successful technical trial on the exchange of eBLs and other digital trade documents was concluded by DBS Singapore, DBS China, and Makino Asia Pte Ltd.

<sup>5</sup> <https://container-news.com/rotterdam-and-singapore-proceed-with-eb1-trials/>

<sup>6</sup> <https://www.tradetrust.io/static/uploads/tradetrust-newsletter-5.pdf>

<sup>7</sup> <https://www.customs.gov.sg/news-and-media/media-releases/2021-08-18-Media-Release.pdf>



## Annex C: TradeTrust – Successful Trials

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Head of UOB's Group Transaction Banking, So Lay Hua spoke about the digital utility's ability to "transform conventional cross-border trade flows for greater efficiencies. The successful pilots with our Singapore and Shenzhen clients have reduced the processing turnaround time from a few days to within an hour and demonstrated the interoperability of TradeTrust for paperless workflows within the trade o. With this, electronic bills of lading and other electronic trade documents can be transferred across the ecosystem and the whole trade finance cycle in a fast and seamless manner."<sup>8</sup>

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### 05

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#### Introduction of RYTETFAP

Singapore-based digital trade company, GUUD, integrated TradeTrust software into their newly enhanced financing platform (RYTETFAP) as part of their initiatives to simplify global trade processes and provide a more secured online presentation of e-documents.<sup>9</sup> RYTETFAP can now utilise TradeTrust to facilitate the verification of trade documents, such as eBLs, to banks and clients, ensuring the integrity and origins of the documents as they move along the trade chain.

Head of Pay Pillar at GUUD, Desmond Loh noted how RYTETFAP "can help ease trade finance application processes for both large corporates and banks, reducing the time and resources required, especially since they deal with a huge amount of documentation daily." He revealed that such initiatives aid in reducing the inefficiencies and complexities which are endemic with the use of paper-based documentations, making both cross-border trade and cross-border trade finance simpler, more efficient and secure."

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### 06

#### World's First Cross-Border Digital Trade Financing Pilot with ADGM

In November 2011, the world's first cross-border digital trade financing pilot between Singapore's Infocomm Media Development Authority (IMDA), the Monetary Authority of Singapore (MAS) and the Financial Services Regulatory Authority (FSRA) of Abu Dhabi Global Market (ADGM) in collaboration with commercial partners DBS Bank, Emirates NBD and Standard Chartered was concluded.<sup>10</sup> The pilot used TradeTrust's framework to facilitate seamless, efficient and secure transfer of electronic records between jurisdictions in real-time. This helped to mitigate the risk of fraud, reduce costs, and improve trust and efficiency in the trading process.

Emmanuel Givanakis, CEO of the FSRA highlighted, "Trade finance is a key enabler for the continuing development and growth of the global economy. As an international financial centre, ADGM is delighted to work with other MLETR-compliant jurisdictions to provide robust and efficient regulatory and technical infrastructure that helps financial institutions better serve their corporate customers' needs."

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### 07

#### World's First Live Electronic Transferable Record (ETR) Cross-border Trade, supported by Statutory Law Framework

In Q1 2023, the world's first ETR cross-border trade involved ExxonMobil Asia Pacific Pte. Ltd. as the shipper, Bunkerchain as the TradeTrust-enabled digital platform provider and VLK as the vessel owner who is supported by their Protection & Indemnity (P&I) Club.<sup>11</sup> Bunkerchain provided a digital solution that supported the key logistics documentation processes for the cross-border liquid chemical trade involving multiple parties such as a surveyor and custom broker. The use of TradeTrust has enabled the digitalisation of the issuance, ownership title transfer and surrender of the ETR as an electronic Bill of Lading (eBL) between the various stakeholders across different systems. The eBL was legally supported solely by statutory law without the use of any contract law or rulebook. This shipment showed that an eBL issued using the TradeTrust framework can be used in a non-MLETR jurisdiction, such as Thailand.

Low Say Lim, Asia Pacific Liquids Logistics & Distribution Manager, ExxonMobil Asia Pacific highlighted, "This pilot is part of ExxonMobil's efforts to increase our supply chain resiliency through digitalisation of business processes. We welcome frameworks like TradeTrust as an important part of our journey towards digitalization. Such frameworks increase efficiency and cost savings while maintaining high standards and trust, and we hope that this successful trial will lead to increased interest from industry to adopt similar standards."

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<sup>8</sup> <https://www.uobgroup.com/web-resources/uobgroup/pdf/newsroom/2021/uob-tradetrust.pdf>

<sup>9</sup> <https://markets.businessinsider.com/news/stocks/guud-launches-new-ryte-financing-platform-to-make-trade-finance-accessible-for-all-businesses-1030588609>

<sup>10</sup> <https://www.imda.gov.sg/news-and-events/Media-Room/Media-Releases/2021/Worlds-first-digital-trade-financing-pilot-between-MLETR-harmonised-jurisdictions>

<sup>11</sup> <https://www.imda.gov.sg/en/Content-and-News/Press-Releases-and-Speeches/Press-Releases/2023/IMDA-partners-industry-to-conduct-worlds-first-live-electronic-transferable-record-cross-border-trade>

### 08

#### Kicking off an Era of Interoperable Bills of Lading for Trade Finance

In August 2023, Singapore and Indian banks and companies successfully kicked-off the first live transaction using the TradeTrust Framework, for a shipment between Singapore and Indian businesses. The live transaction successfully showcased the digitalisation of cross-border trade financing documentation that can be applied across different systems, aimed at improving the speed, efficiency, and accuracy of information required in shipment transactions. Globally, this was the first shipment to undergo a fully paperless transaction process involving traders, shippers, and banks for an interoperable eBL. This project was implemented in close partnership between government agencies (Ministry of Trade and Industry, the National Institute for Transforming India (NITI) Aayog, Enterprise Singapore, and Infocomm Media Development Authority (IMDA)) and industry partners (DBS, ICICI Bank, Maptrusco, Jindal Stainless, and A.P. Moller-Maersk).

Maja Nyvold, Global Head of Value-Added Services, A.P. Moller-Maersk highlighted, “The electronic bill of lading is the most important enabler to digitalise cross border trade. In this project with TradeTrust, we have successfully tested the digital capability of eBL on aspects of security, speed, interoperability, and cost effectiveness when it exchanges hands with multiple stakeholders across different geographies and jurisdictions. This transaction validates our understanding of the unmet industry needs and Maersk is on track to our commitment of adoption 100% eBLs by 2030.”<sup>12</sup>

### 09

#### First Cross-Border Paperless Trade between China and Singapore powered by IMDA’s TradeTrust and Beijing’s AEOTradeChain Successfully Piloted

In October 2023, the Office of the Leading Group for the Work of the China (Beijing) Pilot Free Trade Zone and the Integrated National Demonstration Zone for Opening up the Services Sector (referred to as the "Beijing Two-Zone Office") and Singapore’s Infocomm Media Development Authority (IMDA) completed the first live digital trade between China and Singapore.

The live shipment from Xiamen to Singapore, involved a China-based food exporter, COFCO Industrial Food shipping a container of canned food to a Singapore-based food distributor Yit Hong. The pilot achieved two firsts for trades between Singapore and China: This is the first end-to-end digitally processed maritime shipment involving the use of an electronic Bill of Lading (eBL) that was enabled through the TradeTrust framework. This is also the first eBL that was transacted across different systems in a decentralized manner.

It is estimated that by promoting digital transformation of their shipping and export processes, the document-processing efficiency of COFCO Industrial Food can be improved by over 80%, and the business operation cost can be reduced by over 30%.<sup>13</sup>

<sup>12</sup> <https://www.imda.gov.sg/resources/press-releases-factsheets-and-speeches/press-releases/2023/sg-india-interoperable-electronic-bills-of-lading>

<sup>13</sup> <https://www.imda.gov.sg/resources/press-releases-factsheets-and-speeches/press-releases/2023/china-sg-paperless-trade-successfully-piloted>