

FACT SHEET**TRADETRUST: A TRUSTED GLOBAL NETWORK FOR DIGITALLY INTERCONNECTED TRADE DOCUMENTS****Background**

International trade forms the backbone of Singapore's open and trade-friendly economy. Conventional digitalisation efforts thus far have given rise to increasingly fragmented and siloed digital ecosystems, preventing an efficient, automated process for the exchange of electronic documents. Working with various agencies and industry partners both locally and overseas, Singapore has developed TradeTrust as a holistic solution to resolve the longstanding issue of paper-based cross-border trade.

TradeTrust adopts a multi-pronged approach and is developed as:

- 1) an interoperability framework that supports the different trade documentation requirements needed to achieve paperless cross border trade,
- 2) a digital utility for system implementers to use without any additional modification, and
- 3) as a reference implementation with an intuitive user interface to demonstrate the core capabilities of the framework and serve as a neutral mechanism to self-check for interoperability.

TradeTrust Framework

TradeTrust comprises a set of globally accepted standards and frameworks that connects governments and businesses to a public blockchain to ensure that documents issued are able to be verified in terms of their source and authenticity. It also offers trusted interoperability of electronic trade documents (including those of a negotiable nature) across different digital platforms.

The framework is aligned towards a global standard: UNCITRAL's Model Law of Electronic Transferable Records (MLETR) which Singapore has adopted into legislation. To facilitate adoption by the international industry, a freely available digital utility has been provided alongside a reference implementation that is designed to comply to the MLETR requirements. Further information on this can be found at <https://docs.tradetrust.io>.

TradeTrust Digital Utility

The TradeTrust digital utility is an open source software and is available for download at <https://github.com/TradeTrust>. The software leverages blockchain technology and has functions that enable the verification of authenticity and provenance of digital trade documents like electronic Certificates of Origin. In addition, the software is designed to enable implementers to handle electronic transferable records like electronic Bills of Lading (eBL) in a way that fulfils three key criteria stipulated in the UNCITRAL MLETR: singularity, exclusive control and integrity.

TradeTrust Reference Implementation

The TradeTrust reference implementation is a web-based application that offers the available functions of the TradeTrust framework. It lets users try out how digital trade documents are issued using TradeTrust and how transferable records such as the eBL can be created. This free and neutral interface can also be used to quickly verify the authenticity and provenance of a document issued in such a manner. The TradeTrust reference implementation is available at <https://www.tradetrust.io>.

Benefits of TradeTrust

TradeTrust can bring benefits to the global trade, finance and logistics community:

1) Increased efficiencies through certainty

Reduce the risk of fake documents/information, as sources will be immutably recorded. This removes the need for repetitive checks by the various parties to ascertain whether documents received are legitimate.

2) Reduced costs of documentation

Digitalising paper documents eliminates costs such as printing, handling and transportation of typically hundreds of pages amongst numerous parties for a single shipment of cargo. This will significantly reduce the costs of shipping¹.

3) Support for new service offerings through digitalisation and interoperability

TradeTrust works with the current ecosystem to enable various enterprise and platform systems to be interoperable. Coupled with the enabling legal validity of electronic trade documents, TradeTrust can:

- Aid the convergence of physical, financial and document chains, making automation of key processes possible, e.g. automate payments or release of funds using smart contracts when conditions are met.
- Leverage transparency and integrity of shipment events to lower some risks for cargo insurance where underwriters can reinvent the way cargo insurance premiums are priced, e.g. instead of static pricing, they can dynamically price the premium as cargo moves through its voyage, lowering the cost of shipping.

Key Milestones

- 1) **First TradeTrust Transaction** in Nov 2019 conducted through DBS Bank, Trafigura, International Chamber of Commerce (ICC), Perlin Network and IMDA, using the ICC TradeFlow powered by TradeTrust, for a shipment of iron ore worth USD20M from South Africa to China. Documentation time was reduced by more than half, from 45 to 20 days.
- 2) **Partnership with ICC and 17 firms to accelerate trade digitalisation** through an MOI to facilitate and adopt digital technologies in Jan 2020.

¹ Trade document processing and administration is estimated to add 20% to the physical cost of shipping a single container. <https://www.ibm.com/blogs/blockchain/2018/04/enterprise-ready-blockchain-brings-transparency-to-supply-chains/>

- 3) **TradeTrust Challenge** launched in 2019 saw an award to six winning proposals to use TradeTrust to develop applications to facilitate trade digitalisation.
- 4) **Partnership with SWIFT to drive global trade digitalisation** through collaboration announced at SIBOS in Oct 2020.
- 5) **Singapore Electronic Transactions Act** amendment which adopts MLETR with modifications into law came into force in Mar 2021. The ETA amendments enable the creation and use of electronic Bills of Lading (eBLs) that are legally equivalent to paper-based Bills of Lading.
- 6) **IMDA together with the Maritime and Port Authority of Singapore (MPA) are co-leading projects to conduct proofs of concept on eBL.** In Jan 2021, two major transshipment ports along the Europe-Far East trade lane, completed a shipment using an eBL to shadow a live shipment. Two different platforms - Singapore-based #dltledgers' blockchain platform and Netherlands-based NaviPorta platform performed title transfer transaction and surrender of the eBL issued by the carrier.
- 7) **IMDA, Singapore Customs and the Australian Border Force** announced in Aug 2021, the successful completion of trial to **authenticate e-certificates of origin** between the IMDA's TradeTrust interface and Australia's InterGovernment Ledger platforms.
- 8) Three successful **industry-led trade financing pilots completed** under the Singapore – China Shenzhen Smart City Initiative. Announced in Oct 2021, **UOB, together with its Shenzhen Branch in China**, and their clients have successfully concluded two digital trade financing technical trials. **DBS Singapore, DBS China** and their client have also conducted a third successful technical trial. The trials demonstrated how key maritime trade documents like the eBL could be used across different trade financing platforms and jurisdictions.