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 a) a framework to connect different aspects required for trade digitalisation, b) as a digital utility for the exchange and verification of documents, and c) as a reference implementation with a ready user interface for direct access.

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 verifiable and safeguards against tampering. This also offers trusted interoperability that enables the exchange of electronic trade documents across different digital platforms. The framework has four key components.
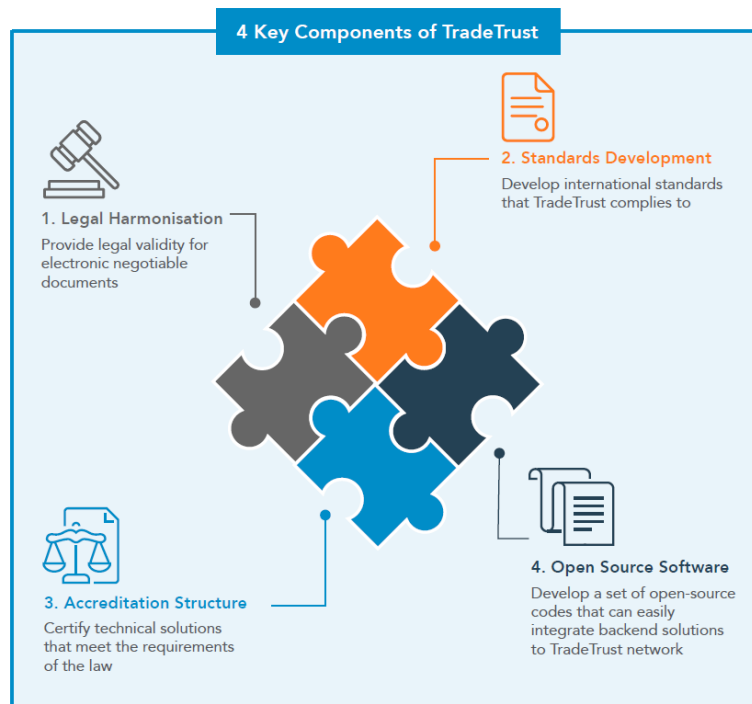

4 Key Components of TradeTrust

1. Legal Harmonisation
Provide legal validity for electronic negotiable documents

2. Standards Development
Develop international standards that TradeTrust complies to

3. Accreditation Structure
Certify technical solutions that meet the requirements of the law

4. Open Source Software
Develop a set of open-source codes that can easily integrate backend solutions to TradeTrust network

Figure 1: Four key components of TradeTrust

TradeTrust Digital Utility

Using distributed ledger technology (DLT), the TradeTrust digital utility will provide participants with proof of authenticity and origins for these documents, enabling a more seamless and efficient flow of goods between digitally interconnected trading partners. The digital utility is an open source software and is available for download at https://github.com/TradeTrust. The software has functions that enable the verification of authenticity and provenance of digital trade documents like the electronic Certificate of Origin. This underlying notarisation foundation is powered by the OpenAttestation framework.

In addition, the software is designed to handle electronic transferable records like electronic Bills of Lading (eBL) in a way that fulfils the three criteria stipulated by the UNCITRAL Model Law of Electronic Transferable Records (MLETR[1]) which are to maintain singularity, exclusive control and integrity. The current version is able to perform transfer on trade documents with title (such as eBL) electronically, which is pivotal in transforming paper-based processes to digital ones for cross-border trade.

TradeTrust Reference Implementation

The TradeTrust reference implementation is a web-based application that offers the available functions of the TradeTrust framework. It consists of an interface to enable users to test how digital documents are issued using TradeTrust and/or how transferable records such as the eBL are created. It also provides a free and neutral interface for users to quickly verify a digital document for its authenticity and provenance. 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 shipping[2].

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[1] UNCITRAL Model Law on Electronic Transferable Records (2017)
https://uncitral.un.org/en/texts/ecommerce/modellaw/electronic_transferable_records
[2] Trade document processing and administration is estimated to add 20% to the physical cost of shipping a single container.

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.

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) 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.

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https://www.ibm.com/blogs/blockchain/2018/04/enterprise-ready-blockchain-brings-transparency-to-supply-chains/