



Media release

This is a joint media release between the Australian Border Force, IMDA Singapore and Singapore Customs

Australia and Singapore's blockchain trial shows promising results for reducing transaction costs

18 August 2021

Australian Border Force (ABF), the Infocomm Media Development Authority of Singapore (IMDA), and Singapore Customs, along with industry participants, have concluded a blockchain trial to prove trade documents can be issued and verified digitally across two independent systems, reducing cross-border transaction costs.

The blockchain trial was initiated as part of the Australia-Singapore Digital Economy Agreement to make cross-border trade simpler between the two countries. The trial successfully tested the interoperability of two digital verification systems – the ABF's Intergovernmental Ledger (IGL) and IMDA's TradeTrust reference implementation.

The trial demonstrated Australia's capability in issuing high integrity digital trade documents that can be instantly authenticated, provenance traced, and digitally processed. QR-codes embedded with unique proofs are inserted into digital Certificates of Origin (COO), enabling immediate verification for authenticity and integrity of the document when scanned or machine-read.

A key success of the trial is the acceptance of verifiable COOs by a regulatory authority, Singapore Customs. Trial participants from industry, including the Australian Chamber of Commerce and Industry, Australian Industry Group, ANZ Bank, DBS Bank, Standard Chartered and Rio Tinto, noted the benefits of improved efficiency through time and cost savings by using verifiable COOs.

ABF Commissioner Michael Outram said he was pleased with the positive results which will contribute to improving cross-border processes for Australian trading community.

"ABF is proud to pioneer cutting-edge digital verification projects in Australia. We understand this collaboration is among the first to involve multiple government agencies from two countries to achieve cross-border document interoperability.

"Digital verification and verifiable documents show promise as a 'circuit-breaker' to disrupt persistent paper-based evidence required by authorities," Commissioner Outram said.



The goal of the IGL platform is to progressively remove the need for paper documents and reduce cross-border transaction costs for Australian business, consistent with commitments under the Simplified Trade System reform agenda.

Both IGL and the TradeTrust reference implementation use the TradeTrust framework as the key underlying technology to allow interoperability, so the document can be verified by both systems. TradeTrust's approach to verification provides flexibility to allow documents to be verified not only in digital format but also when the documents are converted into a paper document at any point of the transaction.

Mr Lew Chuen Hong, Chief Executive of IMDA said: "IMDA spearheads the development of digital utilities as baseline infrastructure for the digital economy. As one such utility, TradeTrust helps verify documents for more efficient cross-border trade. This successful trial demonstrates TradeTrust's value as a framework to connect governments and businesses for more effective trade flow."

COOs are usually issued on paper and businesses regularly wait days to receive the hard-copy document via courier before dispatching to multiple parties, including customs agencies, brokers, and banks. Paper trade documents are generally required by authorities to prove authenticity and integrity.

Mr Ho Chee Pong, Director-General, Singapore Customs said the COVID-19 pandemic has accelerated trade digitalisation, and demonstrated the importance of cross-border paperless trade.

"Singapore Customs appreciates the close collaboration with Australia in this aspect, and looks forward to further collaboration in promoting paperless trade," Mr Ho added.

In using this blockchain-based, decentralised approach, transactions can become more cost effective and offers scalability without the need for expensive data exchange infrastructure, lowering barriers to the adoption of paperless cross-border trade.

Resources:

Annex A: About TradeTrust

Annex B: Quotes from Industry Partners

About IGL: The IGL is a digital verification project developed by the ABF to facilitate cross-border trade and improve paperless trading, using COOs as a first test case. The IGL digital verification platform, currently at proof-of-concept stage, uses emerging technology – blockchain and verifiable credentials – and the TradeTrust framework.



**Australian
BORDER FORCE**

**INFOCOMM
MEDIA
DEVELOPMENT
AUTHORITY**



About Australian Border Force

Australian Border Force (ABF) is Australia's frontline border law enforcement agency and customs service.

Our mission is to protect Australia's border and enable legitimate travel and trade. Our vision is to be a global leader in border law enforcement and trusted partner that helps build a safe, secure and prosperous Australia.

We aim to facilitate the movement of people and goods across the border. We work closely with other agencies to share knowledge, expertise and intelligence in order to detect, deter and prosecute those who attempt to do us harm at the border. The work we do contributes to safeguarding Australia's national security.

About Info-communications Media Development Authority (IMDA)

The Infocomm Media Development Authority (IMDA) leads Singapore's digital transformation with infocomm media. To do this, IMDA will develop a dynamic digital economy and a cohesive digital society, driven by an exceptional infocomm media (ICM) ecosystem – by developing talent, strengthening business capabilities, and enhancing Singapore's ICM infrastructure. IMDA also regulates the telecommunications and media sectors to safeguard consumer interests while fostering a pro-business environment, and enhances Singapore's data protection regime through the Personal Data Protection Commission. For more news and information, visit www.imda.gov.sg or follow IMDA on Facebook IMDAsg and Twitter @IMDAsg.

About Singapore Customs

Singapore Customs – a department under the Ministry of Finance – is the lead agency for trade facilitation and revenue enforcement.

We facilitate Singapore's external trade, through collaboration with government agencies and businesses, robust regulations and effective enforcement.

Our vision is to be a leading Customs that advances Singapore's economy by protecting revenue, and making trade easy, fair and secure.

Annex A: About TradeTrust

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.

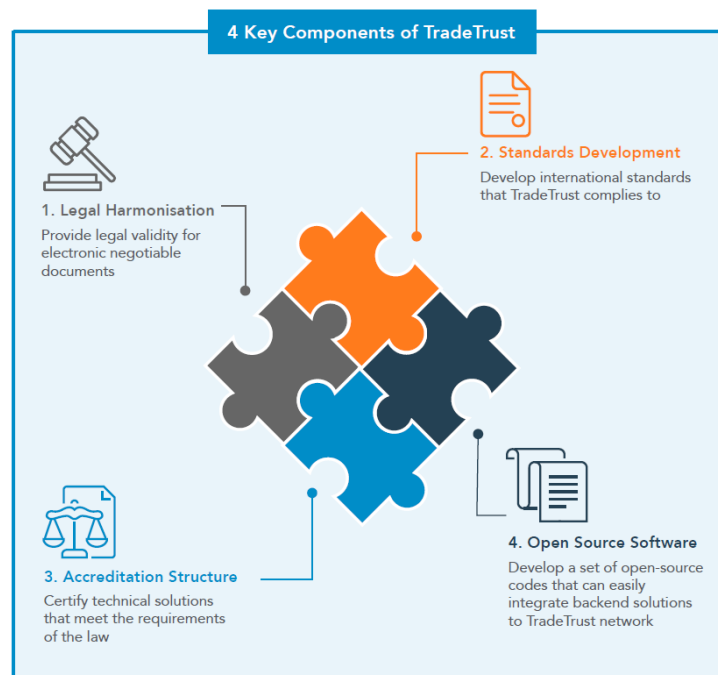


Figure 1: Four key components of TradeTrust

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 notarisatation 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 (MLETR¹) 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 shipping².

¹ UNCITRAL Model Law on Electronic Transferable Records (2017)
https://uncitral.un.org/en/texts/e-commerce/modellaw/electronic_transferable_records

² Trade document processing and administration is estimated to add 20% to the physical cost of shipping a single container.



Australian
BORDER FORCE

IM INFOCOMM
MEDIA
DEVELOPMENT
AUTHORITY



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.



Annex B: Quotes from Industry Partners

ANZ Bank

“Having different trade and supply chain systems creates ‘digital islands’ which limits access to e-documents by parties across systems. Additionally, some parties in a typical end-to-end supply chain may require paper documents. Both of these challenges restrict the use of e-documents through the full supply chain, leading to higher transaction costs and limiting scalability. This trial is an exciting development that will solve a real customer pain point. Being able to issue and digitally authenticate trade documents, without parties being on the same platform, will deliver cost-effective process efficiencies and help mitigate fraud risk. ANZ has a rich history as an innovator in trade finance and is pleased to be partnering with the Australia and Singapore Government agencies to deliver ideas and solutions that promote movement of trade across the region.”

Ashok Devidas,
Head of Trade and Supply Chain Product Solutions, International, ANZ Bank

Australian International Chamber of Commerce

“The Australian Chamber of Commerce and Industry, as an industry leader, supported the project on blockchain enabled data exchange between Australian and Singapore for FTA origin compliance. Our experience was overwhelmingly positive and the process will only improve from this initial pilot. Singaporean authorities accepted the electronic format of the certificate of origin documents without problems. We hope that Australia will reciprocate so that Singaporean exporters also experience the transparency, administrative and security benefits of trade digitalisation. We look forward to the cost benefit analysis of digital ledgers as the technologies evolve to make trade easier and lower cost.”

Bryan Clark,
Director, Australia International Chamber of Commerce

Australian Industry Group

The national employer association, Ai Group was delighted to be part of the trial for an inter-governmental ledger (IGL) for the digital verification of digital documents such as Certificates of Origin (CoO). As a certifying body for these documents in Australia, Ai Group has received requests from our users for a verification system that enables overseas Customs authorities to verify these digital documents. The implementation of an IGL with electronic CoO would lead to more effective and efficient cross border trade.

Innes Willox
Chief Executive Officer, Australian Industry Group



DBS Bank

“Ability to ascertain the provenance of trade documents and enabling interoperability of platforms will remain dominant themes in the digital transformation of global trade and trade finance. The successful outcome of this pilot trial lays the necessary groundwork to scale digital cross border trade with greater trust amongst all industry participants. More importantly, the close collaboration between Singapore and Australia will help pave the way towards a fully digital cross-border trade ecosystem, drawing synergies with other digitalisation efforts for documents such as electronic bills of lading.”

Sriram Muthukrishnan

Group Head of Product Management, Global Transaction Services, DBS Bank

Rio Tinto

“New and innovative digital technologies continue to have a transformational impact on the mining and commodities industry and the way we engage in cross-border trade across the region. The successful application of blockchain technology in this trial has shown us the potential to considerably improve turnaround times for the exchange of trade documentation from 48 hours to just under a day – a huge benefit in terms of efficiency, security and interoperability across systems. The leadership taken by both the Australian and Singaporean governments has brought us a step closer to a full digital trade future and we are proud to partner on this pioneering initiative.”

Alf Barrios,

Chief Commercial Officer, Rio Tinto

Standard Chartered Bank

“Further to the active role that Standard Chartered played in the adoption of TradeTrust, we are delighted to have supported the interoperability test between ABF and IMDA’s digital systems to a successful conclusion. The instant authentication of digital COOs is a meaningful step towards building a trusted trade ecosystem where verifying the provenance of goods is performed with great efficiency. These much-improved track and trace capabilities that certify the origins of cargos can ensure that we operate within an ethical and accountable supply chain. This enhanced environment will drive sustainable trade finance and enable more resilient supply chains to build a better future for all.”

Himanshu Maggo

Head of Trade Innovation, ASEAN, Standard Chartered Bank