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# Trade Digitalisation: TradeTrust


Mr. Loh Sin Yong
Director, TradeTrust
Digital Utilities Cluster
Sectoral Transformation Group
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## ROLES OF IMDA

### DIGITAL CHAMPION

Drive digitalisation across industries

Supporting a digitally enabled workforce

### INDUSTRY DEVELOPER

Develop the digital tech and media industries as an engine of growth for Singapore

Foster a data ecosystem for the digital economy

### ENABLER

Master-planner for connectivity, digital infrastructure & standards

Prepare tech & media manpower, and segments of society to be digitally-ready

### REGULATOR & PROTECTOR

Ensure resilient telecom & broadcast networks

Govern market conduct and protect consumer interest through infocomm, media, postal and data protection regulation

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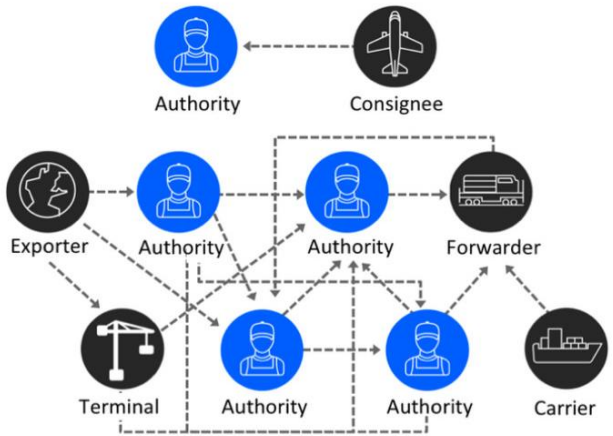
## DIFFICULTIES WITH PAPER IN CROSS BORDER TRADE

Current State




Just 1 shipment involves

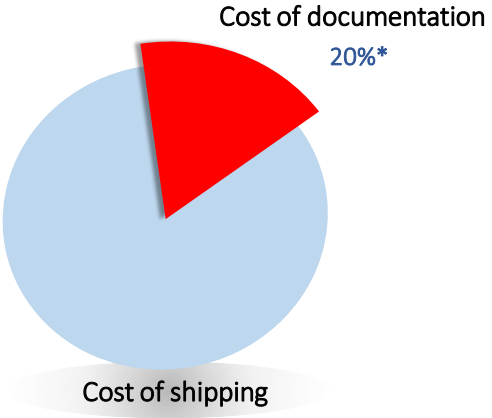
- **Many parties** across different sectors
- **Many exchanges** of information
- **Many silo systems**

**Inefficient**

- Manual handling
- Vulnerable to fraud

**Fragmented Systems**

- Costly connections
- No interoperability




This inefficiency is **costly**

**Maersk and IBM's Paper Trail Research in 2014*

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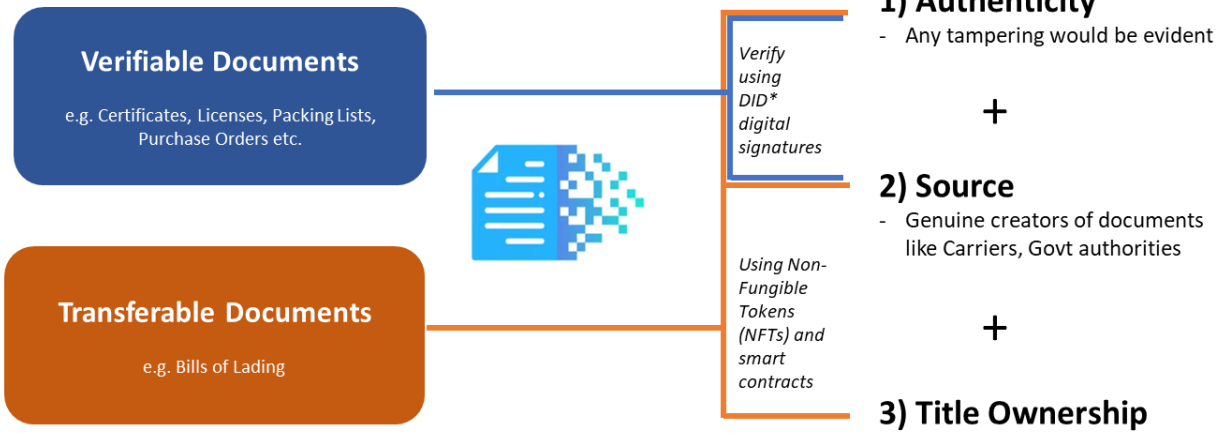
# TRADETRUST'S 3 KEY FUNCTIONALITIES: AUTHENTICITY, SOURCE & TITLE OWNERSHIP FOR TRADE DOCUMENTS

- TT is one of IMDA's DUs and was designed to provides the means to verify the authenticity and source of a document, as well as enable the digitalisation of transferable documents into Electronic Transferable Records (ETR) that have the legal ability^ to effect title transfers.




**Decentralized Identifiers (DID) are a new type of unique, cryptographically verifiable identifiers that are designed to be decoupled from centralized registries, identity providers and certificate authorities*

## Core-Tech of TradeTrust

- Uses Decentralised Identifiers (DID) and digital signatures to verify the source and authenticity of documents.
- Uses Blockchain to create Non-Fungible Tokens (NFTs) to represent title ownership and enable transfers from one party to the next.

*^Singapore's 2021 amendment of its Electronic Transactions Act (ETA), one of the first few internationally, enables the creation and use of ETRs such as electronic Bills of Lading (eBLs), empowering practitioners to reap the benefits of digitalisation more easily.*

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## WHAT IS TRADETRUST?

**TradeTrust** is a framework that comprises **globally-accepted standards** that connect governments and businesses to a **public blockchain** to enable **trusted interoperability** of electronic trade documents **across digital platforms** AND it is offered as a **digital utility.**

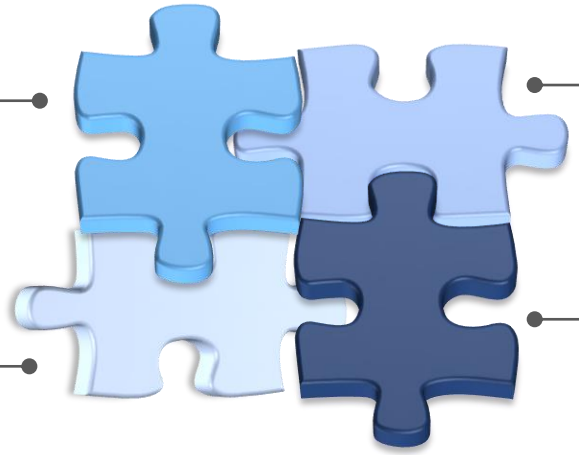
### 4 Key Components of TradeTrust

**1. Legal Harmonisation**

*Provide legal validity for electronic negotiable documents through compliance to MLETR*

**2. Standards Development**

*Develop international standards that TradeTrust complies to*



**3. Accreditation Framework**

*Certify technical solutions meet the requirements of the law*

**4. Software Components**

*A set of open-source software code that can easily integrate backend solutions to the TradeTrust network*

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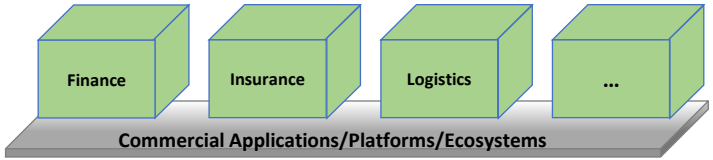
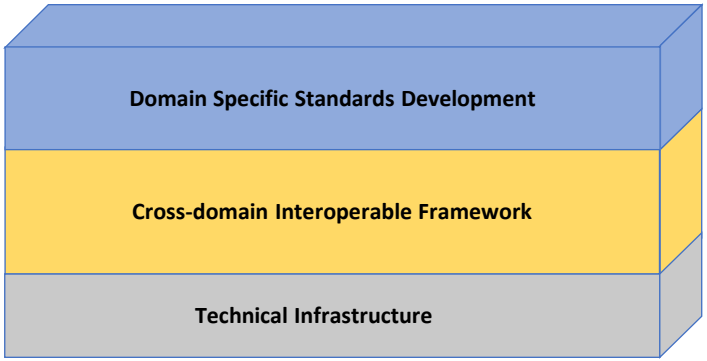
## THE TRADETRUST FRAMEWORK

**The Framework SUPPORTS Platforms and Systems to achieve the 3 functionalities ACROSS Platforms and Systems. The technical methods are implemented in open-source software that has been made freely available to the international community**




### Business-led

- Digital Ecosystems Co-Development
- Enterprise Adoption & Digitalisation

### Govt-led

**TradeTrust Framework**
(Standards, Semantics, Legal)

- To legally recognise cross-border digital documents (e.g. eBL, eCO, eInvoice, eSPS Certs, eBills of Exchange)
- To enable system interoperability of trusted digital documents exchange through standards

**Cross-border Recognition**

United Nations UNCITRAL
United Nations ESCAP

**Standards Devt**

UN/CEFACT
ISO

**TradeTrust Digital Infrastructure**

- Blockchain gateway that allows business apps to consume blockchain services through standardized APIs, achieving decoupling that eases the burden on them of enhancement and maintenance while blockchain technologies evolve.
- Published as open source for ease of industry adoption and for further enhancements by the open source community
- To be contributed as reference implementation to standards bodies to support standards development and accelerate TradeTrust usage

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## TRADETRUST DESIGN PRINCIPLES

**Public and Permissionless**
*No central governance authority*

**Data Off-Chain**
*Preserves data confidentiality*

**Payload Agnostic**
*No data format or standards restrictions*

**Open-Source**
*Full transparency for faster adoption*


**MLETR-Compliant**
*Meet the requirements of the law (for electronic negotiable documents)*

*MLETR = Model Law on Electronic Transferable Records published by United Nations Commission on International Trade Law in Sept 2017*

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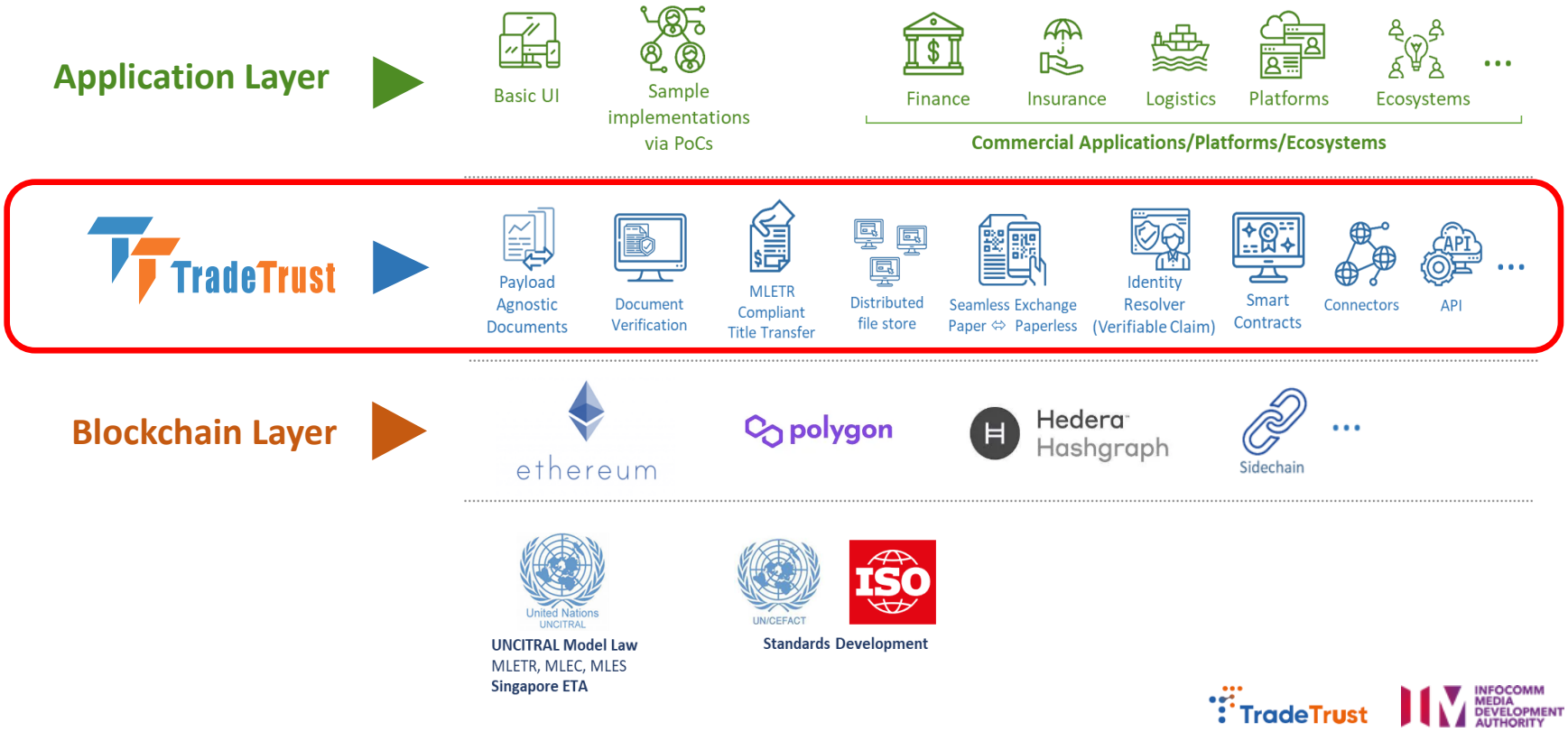
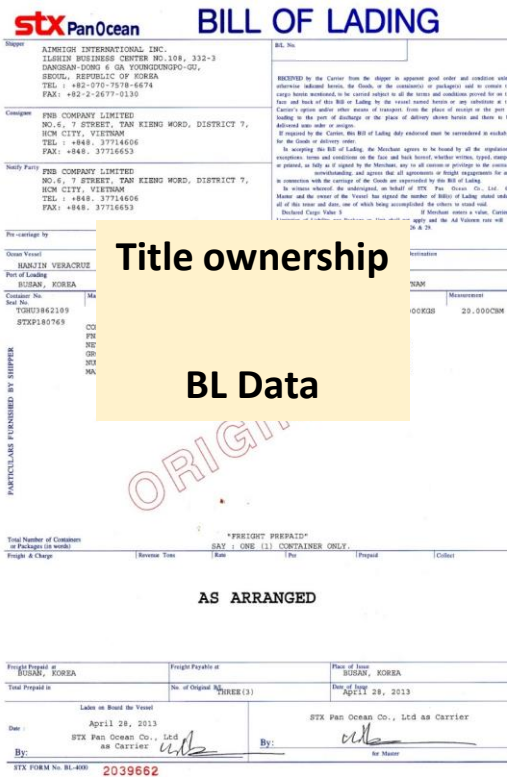
## TRADETRUST FRAMEWORK IS ACCESSIBLE TO ALL



## DEALING WITH TRANSFERABLE DOCUMENTS (BL AS EXAMPLE)

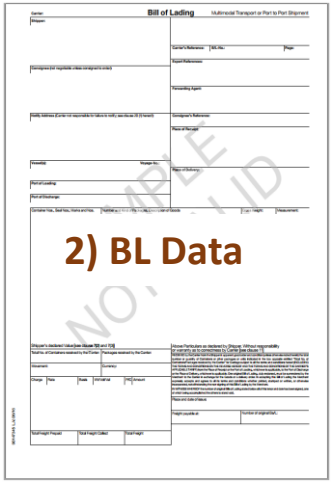
*Paper Transferable Instrument*




*Electronic Transferable Record*

**1) TITLE ownership**

+

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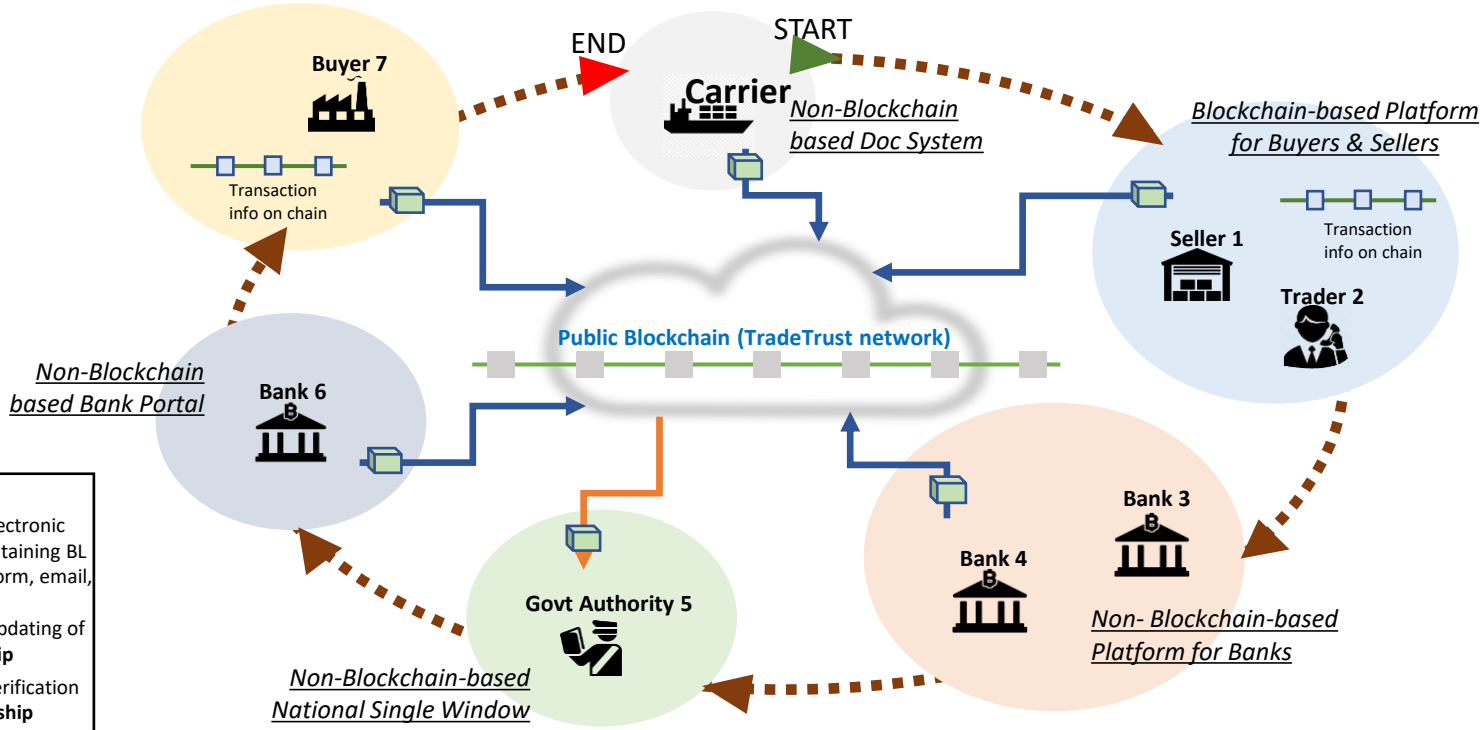
## TRANSFERABLE DOCUMENTS' INTEROPERABILITY




**LEGEND:**

- Transport of electronic documents containing BL data (e.g. platform, email, portal)
- Reading and updating of **Title Ownership**
- Reading and verification of **Title Ownership**
- TradeTrust Open Source software
- Public Blockchain Nodes

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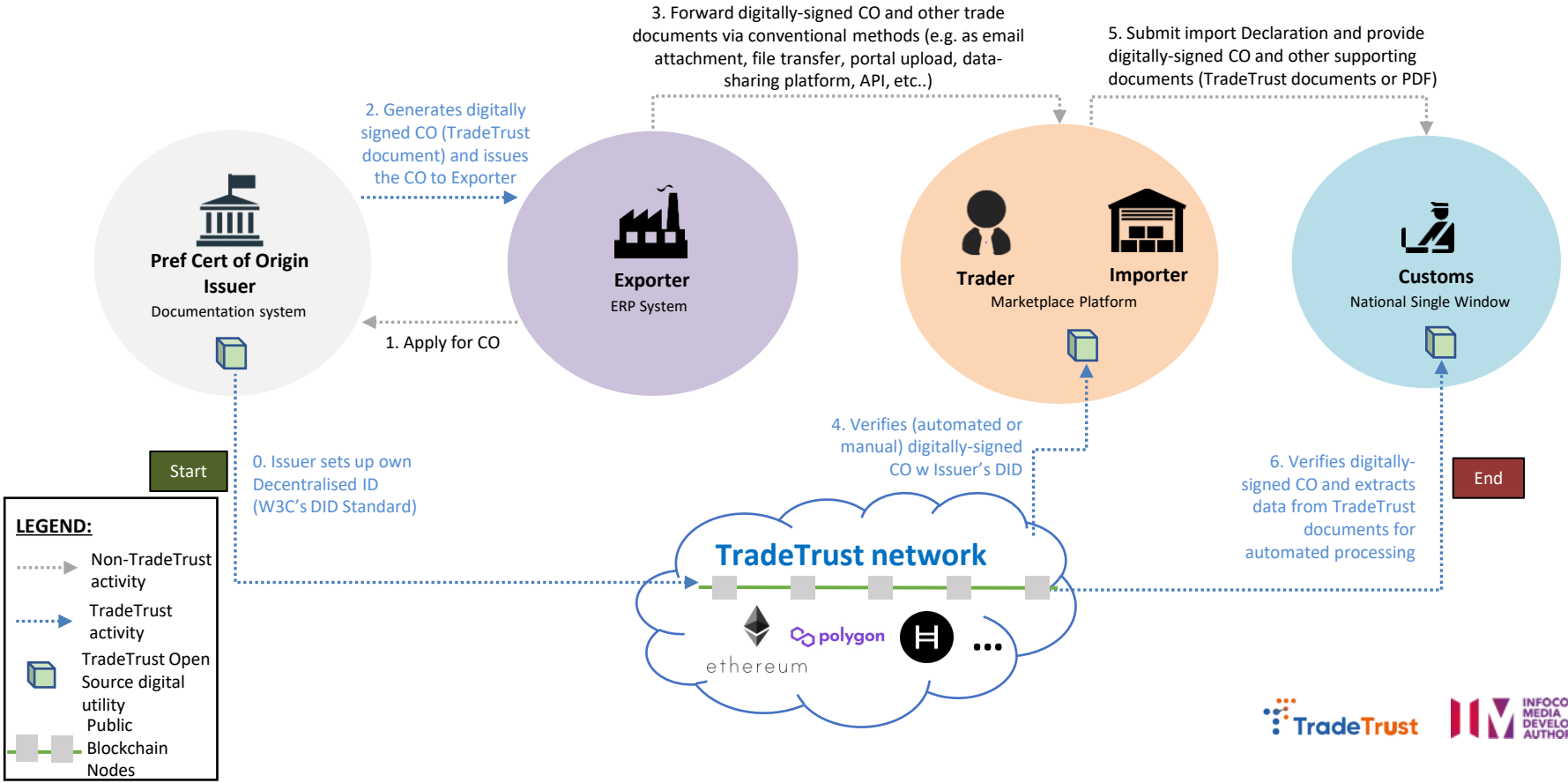
# NORMAL DOCUMENTS' INTEROPERABILITY



## GLOBAL PARTNERSHIPS


**Convening alongside the World Economic Forum Annual Meeting in Davos, the International Chamber of Commerce (ICC) has joined the Singapore Government and industry partners to accelerate the digitalisation of global trade and commerce.**

### Australia and Singapore to trial blockchain for cross-border trade

The trial will test digital verification platforms across both the ABF-developed Intergovernmental Ledger and IMDA's TradeTrust for electronic trade documents.

### SWIFT and Singapore's IMDA Join Forces to Drive Global Trade Digitalisation

TRADE, 5 OCTOBER 2020

*Collaboration combines the reach, scale and reliability of SWIFT with IMDA's efforts on technology and legal frameworks to accelerate trade digitalisation*

### FINANCIAL TIMES

### Singapore charts its way to digital future for trade

Longer term, Singapore is working on a project called TradeTrust that aims to develop an "interoperability framework" for the exchange of digital trade documentation that would simplify and speed up procedures.

### World's first digital trade financing pilot between MLETR-harmonised jurisdictions

***Paves the way for wider adoption of IMDA's TradeTrust framework to facilitate the exchange of digital trade documents in global trade finance***

Port of Rotterdam

### Succesfull Proof of Concept Electronic Bill

In October 2019, IMDA (Infocomm Media and Development Authority) and the Maritime and Port Authority of Singapore (MPA) co-hosted a 2-day workshop for the delegates from Blocklab, Port of Rotterdam's blockchain centre to work together on the requirements of title transfer capability in relation to eBLs for cross-border trade transactions.

DBS

### DBS and Trafigura collaborate with IMDA to launch open-sourced blockchain trade platform

*Cuts end-to-end trade document transit time by more than half from 15 to 20 days*

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## CALL TO ACTION

### 1) Join us to co-create TradeTrust Proofs of Value

**If you're from:**

a) **Shipping lines**
b) **Shippers/Consignees**
c) **Logistics Service Providers**
d) **Financial Institutions providing Trade Financing Service**
e) **Govt Authorities involved in cross-border matters**

### 2) Incorporate TradeTrust code into your Applications

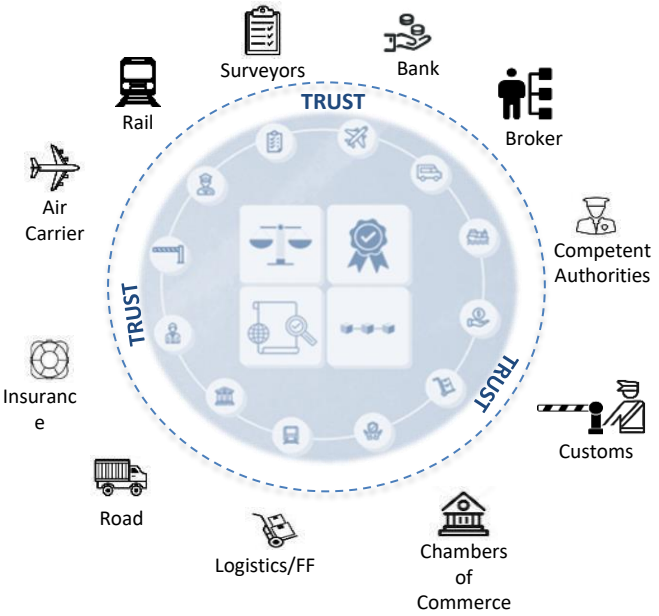
**If you're from:**

a) **Tech Companies**
b) **Platform Providers**

**Useful URLs:**

**Reference Implementation Website: https://tradetrust.io/**
**Docs: https://docs.tradetrust.io/**
**Source code: https://github.com/TradeTrust**

For more info, contact us at: **tradetrust@imda.gov.sg**

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THANK YOU