Driving Interoperable Cross-border Paperless Trade with TradeTrust

Presenter:
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Introduction of the Participating Organisation: IMDA

**DIGITAL CHAMPION**  
Drive digitalisation across industries, with trade digitalisation being an important agenda.  
Supporting a digitally enabled workforce

**INDUSTRY DEVELOPER**  
As the architect of Singapore’s digital future, IMDA develops 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 infoomm, media, postal and data protection regulation

IMDA works to accelerate digitalisation through **close collaboration** with public and private sector partners in Singapore and globally.
Issue: Heavy Dependence on Paper Documents Hinders the Growth of Cross-border Trade

Current State for Cross-border Trade

- Info exchanges
  - Just 1 shipment involves:
    - About 20 parties across different sectors and 10-20 paper documents
    - Many exchanges of information
    - Many silo systems

The Costs of Heavy Dependence on Paper

- Inefficient and lack of security
  - Time delays
  - Manual handling – prone to human errors
  - Vulnerable to fraud

- Fragmented systems
  - Costly connections
  - No interoperability

Just 1 shipment involves:
- 20%* cost of documentation
- Cost of shipping

This inefficiency is COSTLY

*Maersk and IBM’s Paper Trail Research in 2014
Essence of the Solution is to Offer 3 Key Functionalities with Digital Trade Documents

1. **Authenticity**
   - (any tampering would be evident)

2. **Source**
   - (genuine creators of documents like Carriers, Govt authorities)

3. **Legally-valid Performance Obligation Transfer**

- **Verifiable Documents**
  - (e.g., Certificate of Origin)

- **Transferable Documents**
  - (e.g. title documents such as Bill of Lading)

- **Source**
  - (genuine creators of documents like Carriers, Govt authorities)

- **Legally-valid Performance Obligation Transfer**

**TradeTrust**
**Introduction of the TradeTrust Framework**

**TradeTrust** is a framework that comprises **globally-accepted standards** and enables **trusted interoperability** of electronic trade documents among governments and businesses 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

TradeTrust is Particularly Innovative and Effective through 5 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 transferable documents)

The TradeTrust Framework is Accessible to All

Application Layer
- Basic UI
- Sample implementations via PoCs
- Government (e.g., Customs)
- Finance
- Insurance
- Logistics
- Platforms
- Ecosystems

Blockchain Layer
- Ethereum
- Polygon
- Hashgraph
- Sidechain

TradeTrust
- Payload Agnostic Documents
- Document Verification
- MLETR Compliant Title Transfer
- Distributed file store
- Seamless Exchange Paperless
- Identity Resolver (Verifiable Claim)
- Smart Contracts
- Connectors
- API

Commercial Applications/Platforms/Ecosystems

UNCITRAL Model Law
MLETR, MLEC, MLES
Singapore ETA

Standards Development
Key benefits of such a decentralized verifiable architecture are:

1. Remove the need for expensive data exchange infrastructure to be put in place in between exchanging parties.
2. Remove tight coupling and inter-dependencies between exchanging systems. This means exchanging parties can proceed to upgrade and make changes to their IT systems at their own pace according to their own priority.
Case Study: Certificates of Origin Trial using TradeTrust between Australia and Singapore

As part of the Australia–Singapore Digital Economy Agreement

- Driven by Australia Border Force (ABF), Singapore Customs and IMDA
- Test Policy: Acceptance of digitally verifiable documents using Certificate of Origin (COO) as an example
- Test Technology: Interoperability between AU Intergovernmental Ledger (IGL) and the TradeTrust reference implementation
- Issuers of COO: Australian Chamber of Commerce and Industry, Australian Industry Group
- Commercial users: Rio Tinto, ANZ Bank, DBS Bank and Standard Chartered Bank
- Regulatory Authority: Singapore Customs

Participants acknowledged value-add to the cross-border trade process such as instant authentication and provenance.
- Achieved acceptance from regulatory authority (Singapore Customs) and commercial users

Please find out more about the trial here.
There have been multiple successful TradeTrust pilots conducted under various efforts such as Government to Government collaborations, public–private partnerships and industry-led initiatives.

Interest for trials remains strong – there is potential for new trade routes, new public and private sector participants and for different trade documents (e.g., animal health certificates, phytosanitary certificates).

Pipeline for live shipments has also been established.
Collaborations and Partnerships which Demonstrate the Relevance of TradeTrust

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

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

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.

TradeTrust has been featured by international organisations such as:

1) ICC and WTO: ICC DSI and WTO’s Standards Toolkit for Paperless Trade.
2) WTO/WCO Report on disruptive technologies and subsequent publication launch event (2022)
3) WTO–WEF TradeTech Phase 2 Report (2022)

Please refer to this link for examples and evidence of recognition and praise which include but not limited to the collaborations listed on this slide.
Thank you!