Leveraging blockchain for cross-border paperless trade

Mongolia’s Digital Trade Week

26 March 2025 (Wednesday)



About the Speaker



LIONEL SEET

Lionel has nearly 20 years experience in financial services in banking and FinTech. One of the projects he is currently working on is with a Singapore based platform dealing primarily with tokenised Real World Assets overseeing platform operations, platform development and providing input to technology risk management. His previous role was a senior leadership position as Director of Operations in a trade finance FinTech where he was responsible for strategic planning, execution of strategies and day to day business operations. In banking, he held leadership roles across various functions in corporate banking, transaction banking and digitalisation office.

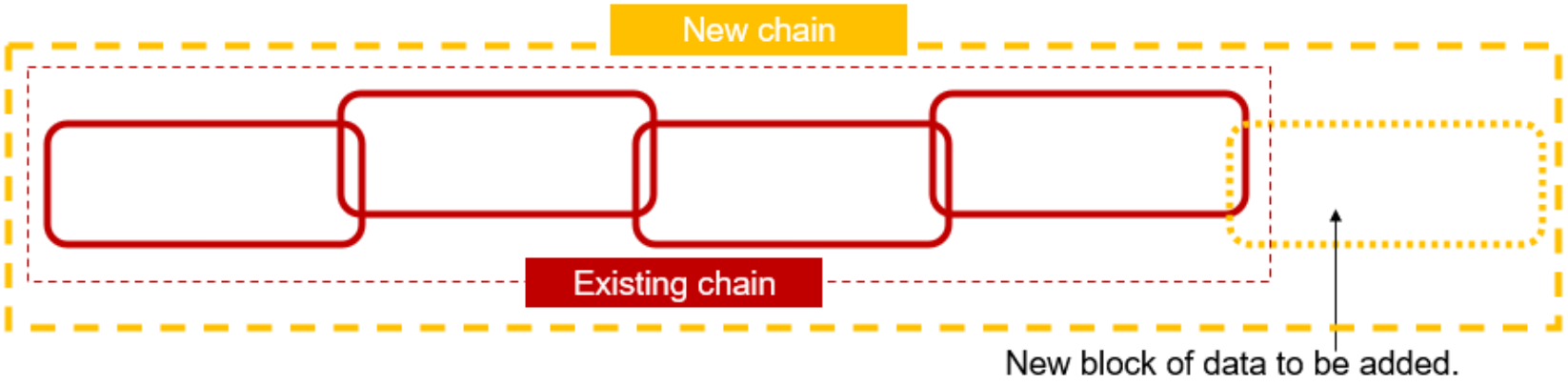
No stranger to problem solving and rolling up his sleeves, Lionel works with stakeholders and has conceptualised and implemented decentralised finance smart contracts, aligning it with business needs and platform workflows. At the same time, he brings experience in building scalable platforms, often integrating data analytics to aid decisioning and data visualisation elements to improve user experience. He is also involved in blockchain validation initiatives regionally.

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Digital Assets Basics



- Digital Assets are represented on a blockchain.
- It is an immutable ledger for recording transactions and tracking assets
- This record is usually achieved by consensus. All participants to recognise this record chain as the correct one to use.

Some key properties of a digital asset include:

- Fungibility
- Durable
- Recognisable
- Transferrable
- Divisible (up to a commonly acceptable fraction)

Digital Assets Basics



NFTs

Proof of ownership of an underlying *real* asset

Eg central bank depository coins, tokenised instruments such as Bill of Lading, property

Proof of ownership of an underlying *digital* asset (eg digital art)

Eg Yuga Labs' Bored Ape Yatch Club



Smart Contracts

Facilitate payment in a digital payment obligation smart contract

Eg electronic Documentary Purchase



Ledgers

Messaging system to facilitate payments, similar to SWIFT

Eg Project Ubin, central bank clearing system, Ripple FX

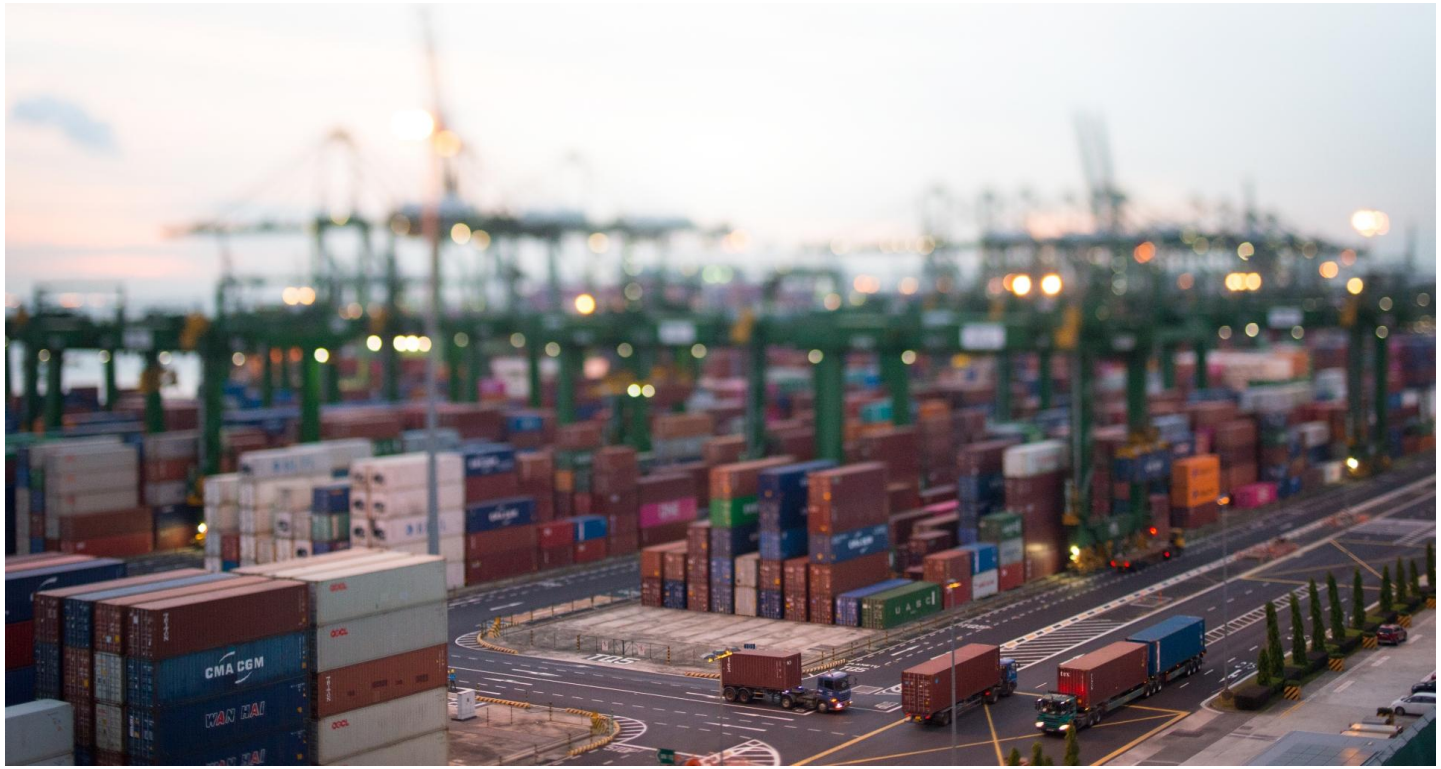
Blockchain key features

In short, blockchain can be used to store transaction specific identifying information. Its function is no different from an offchain digital platform. The main difference is the distributed ledger and the decentralised nature of the data.

Term	Explanation
Distributed Ledger	Many parties have access to the data
Decentralised	No one party on holds the Version of Truth
Smart contracts	Allowable actions predefined to execute if certain conditions are met
Immutability	Very difficult to manipulate record once stored
Transparency and privacy	Transactions are visible, yet private because only identifiers are published

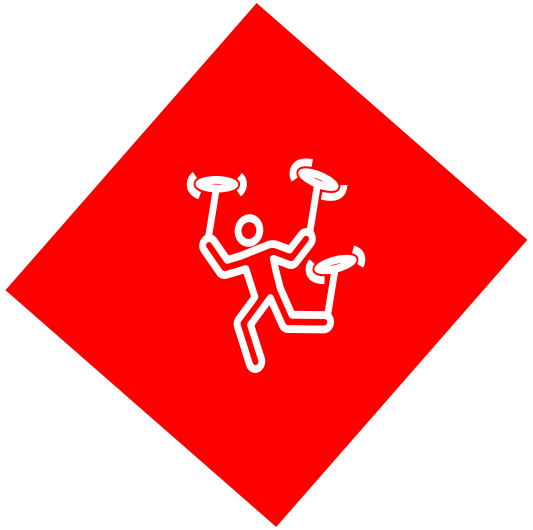
Global Trade Numbers

Based on an earlier study, a staggering 90% of global trade is based on open account payment. In other words, only about 10% (~USD 2tn) of global trade is the conventional documentary trade.[1/]



[1/]https://www.euromoney.com/article/27bjsstsqxhkmh0wsdjlu/treasury/corporates-facing-risks-with-open-account-trading

Key Challenges to Digitalisation

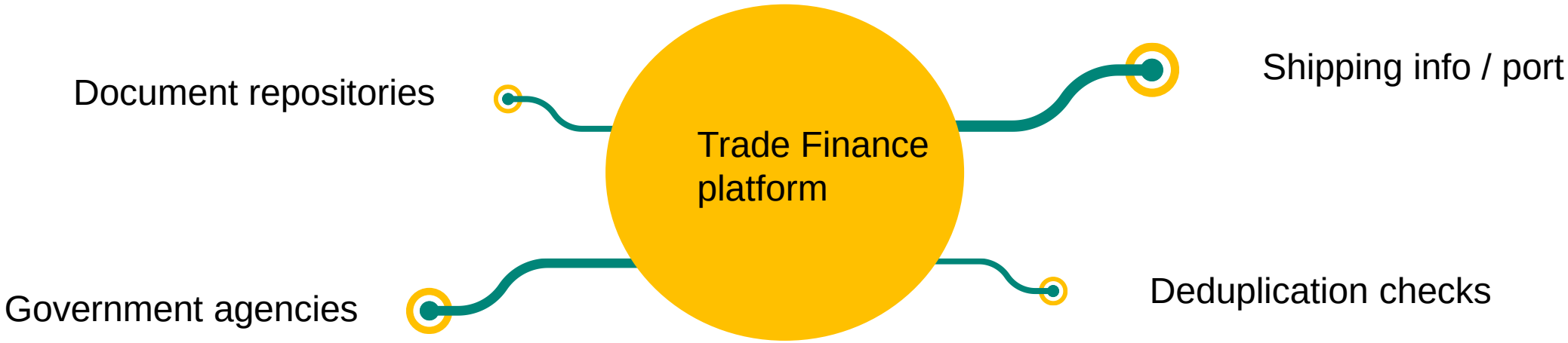


- Regulatory and legal difficulties (domestic and international)
- “Perceived” adoption barriers amongst stakeholders
- Paper based processes

Recent advancement in technology has disrupted traditional finance

KYC & Lending get access to more data points as data “islands” become increasingly connected

Technology has allowed Interoperability and sharing of data



Recent advancement in technology has disrupted traditional finance

Trade Finance platforms and their respective playbook form a “closed loop ecosystem”

Companies are able to participate in various platforms to take advantage of digitalised trade finance process

Use Case

Current players include ICE Digital Trade (formerly essDocs) and Bolero which offer a playbook model. This is a pure platform play within the ecosystem.

Recent advancement in technology has disrupted traditional finance

Banks' willingness to onboard "neutral" Trade Finance platforms

Companies are able to participate in various platforms to take advantage of digitalised trade finance process which are not tied to a specific platform. This model is closer to the conventional documentary trade process.

Use Case

An example is the Singapore based Trade Finance Application Portal which connects companies with their preferred banking partners to submit their documentary trade request digitally.

Recent advancement in technology has disrupted traditional finance

Emergence of service providers to fill the gap caused by regulations

Companies have emerged to close the gaps posed by regulators or corporate policies which are slow to evolve

Key considerations

1. How does a corporate allow an employee/employees to hold private key to sign transaction?
2. How to implement Maker-Checker for the sign off process?
3. How to allow wallet widgets that are not part of Standard Operating Environment?
4. Corporate policy does not allow holding of digital assets.

Digitalisation of financial services

Traditional Finance end customers are spoilt for choice

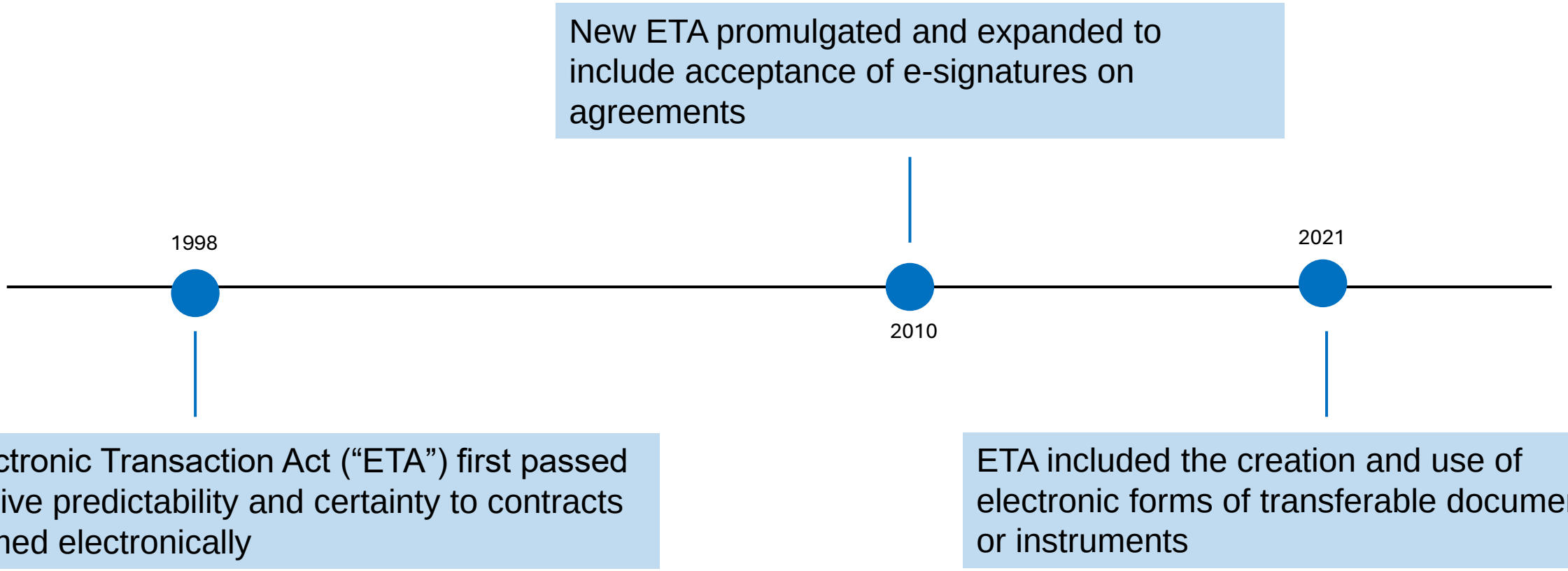
- *Payments*
- *FX fees*
- *Trade Finance*

Some financial products have been successfully fractionalised

- *Investing*
- *Insurance*

The Singapore Story

The Singapore Story



The Singapore Story

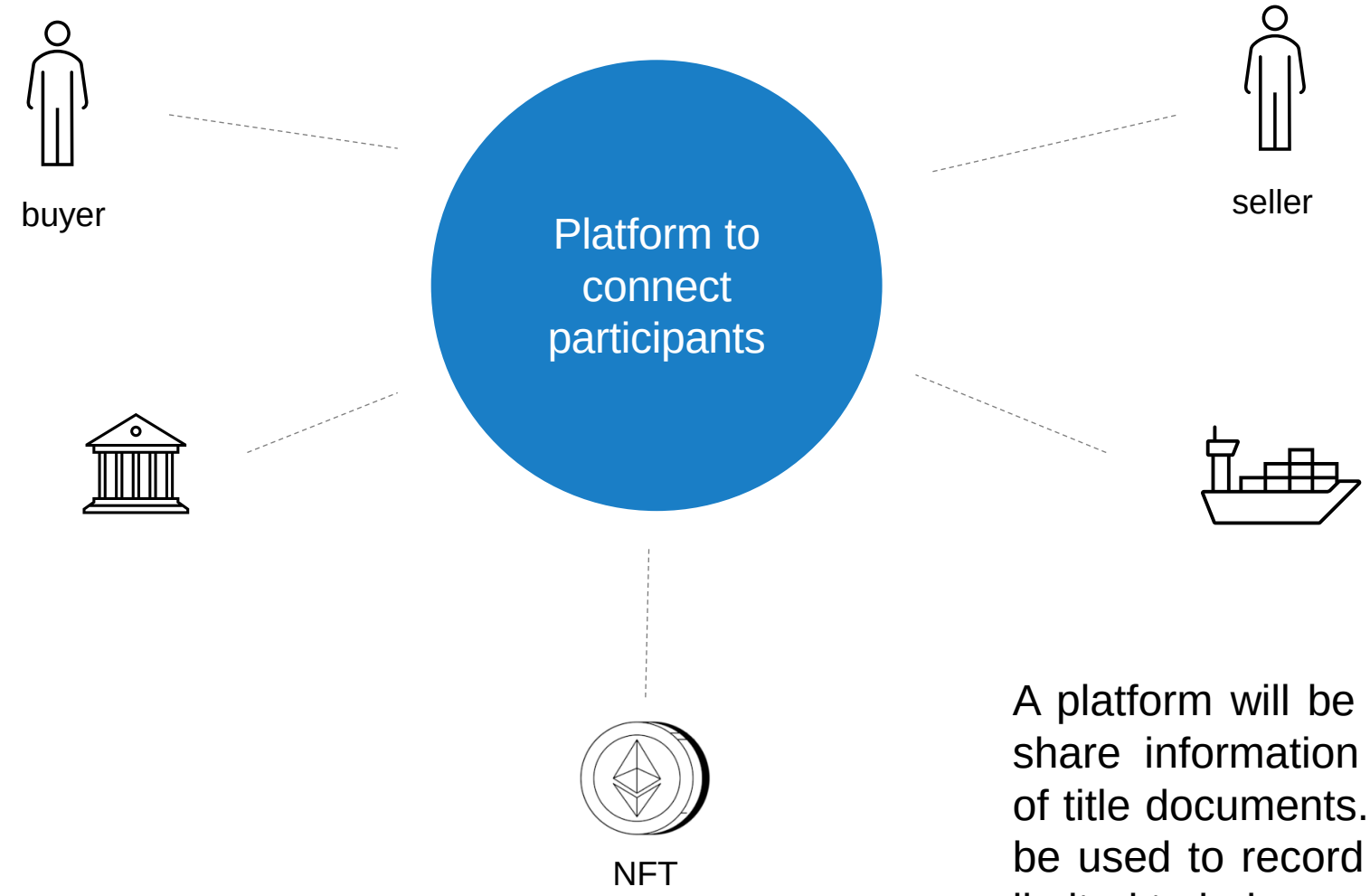
- The electronic framework was strengthened
- Encouragement from government agencies to adopt digital solutions
- 2021 was in the middle of COVID19 with circuit breakers in place
- Businesses had to proceed as per normal
- This drove innovation
- Seamless integration for onramp and offramp – this is highly regulated, but successful

Real world application of blockchain on assets (RWA)

Tokenisation (or fractionalisation in the form of a blockchain token) of financial assets or physical assets

1. Tokenised bonds offered for sale to retail investors
2. Tokenised physical assets offered for sale to accredited investors
3. Intraday institutional liquidity management (repo)
4. Domestic RTGS between Central Bank and participating banks *(pilot)*
5. Purpose Bound Money (PBM) *(trial)*
6. Bill of Lading as an NFT *(trial)*

How it might look like – integrating Bill of Lading as an NFT



A platform will be able to connect participants, share information digitally, transfer ownership of title documents. Do note that blockchain can be used to record transactions too! Its not just limited to being an eBL NFT.

Components to make a successful ecosystem

User education

Domestic technology expertise

Supportive regulatory framework

High level of banking infrastructure available for integration

Q&A

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For more queries, you may reach me.

www.dandemlabs.com
lionel@dandemlabs.com
+65 8715 5993



Thank You!