



## Introduction to a Blockchain based trade platform

2 July 2020

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**NTT DATA**  
Trusted Global Innovator

# NTT DATA Blockchain Initiative

Teams from around the world with different backgrounds driving Go To Market



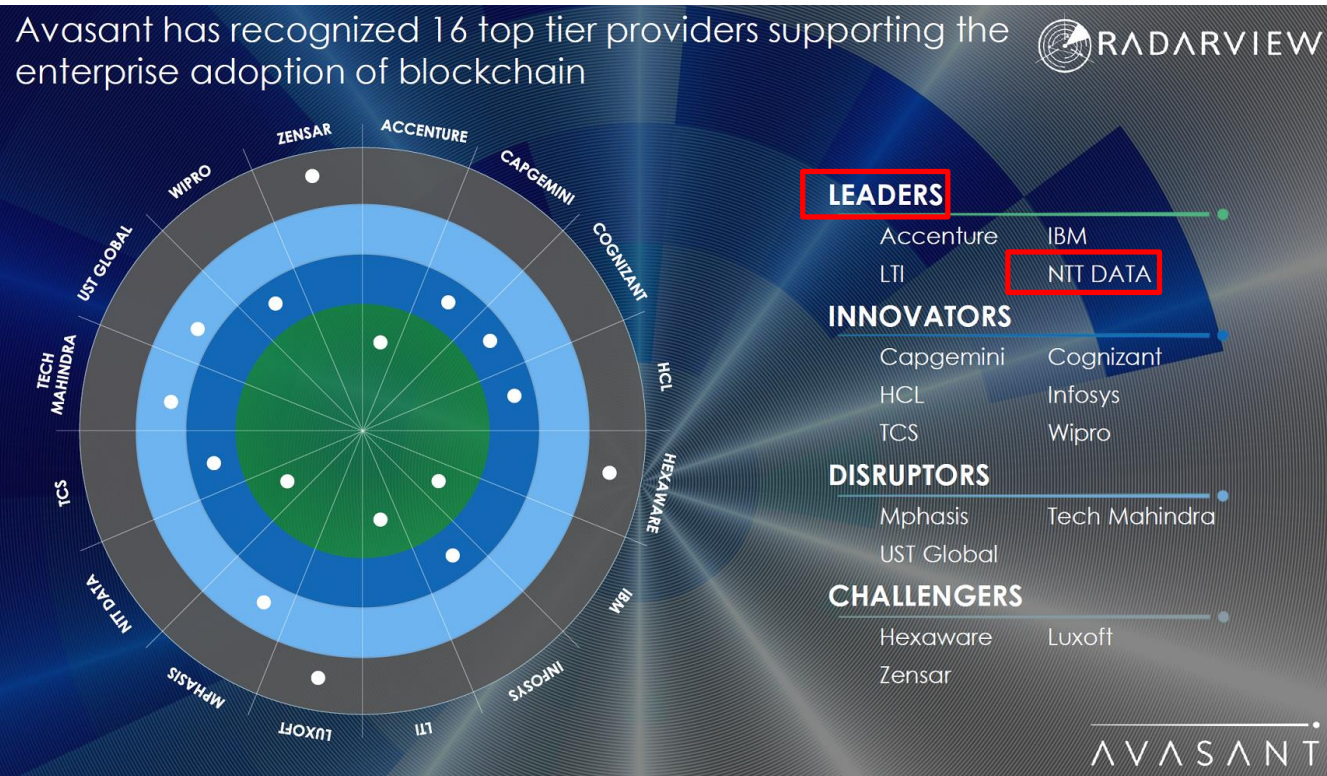
**24 countries/regions** in Blockchain Center of Excellence



# NTT DATA: Blockchain Leader

## Highly evaluated reports from several research companies

### Avasant Report



Refs: Blockchain Services RadarView 2018 (July 2018)

### Everest Group

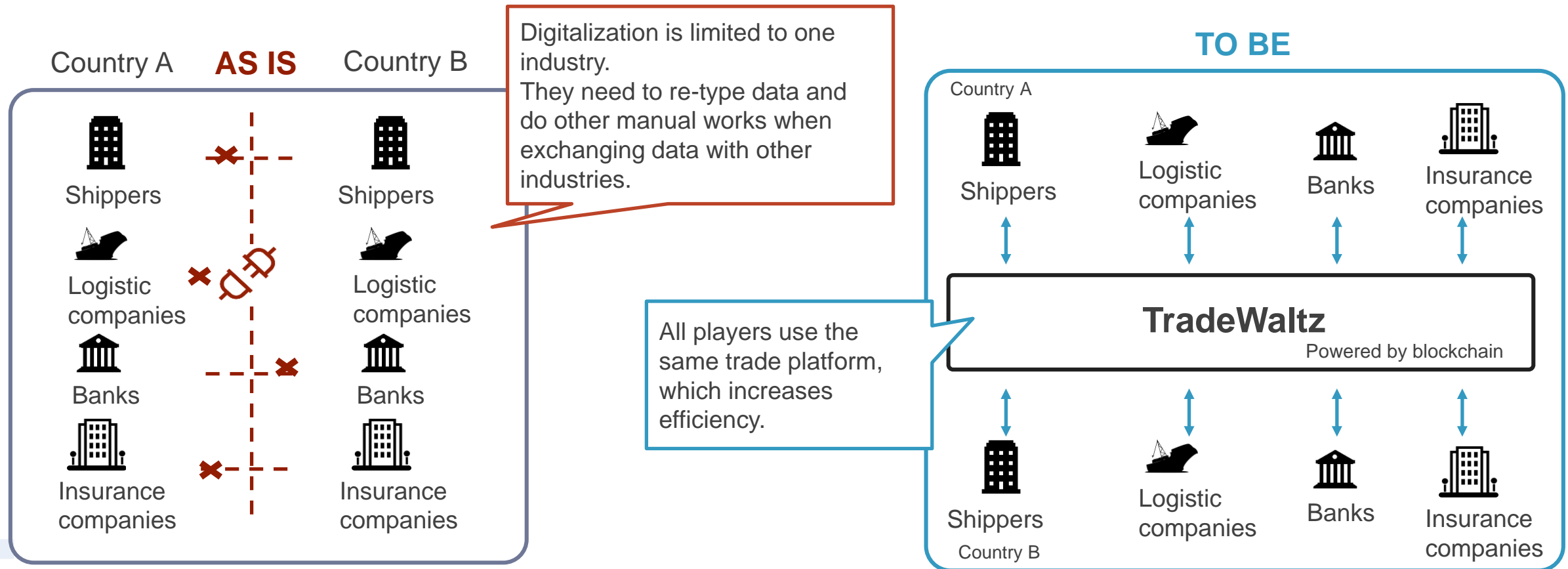
#### Blockchain Services PEAK Matrix™ Assessment 2019



Refs: Blockchain Services PEAK Matrix™ Assessment 2019

# What is TradeWaltz?

TradeWaltz is a cross-industry business trading platform built on the benefits of blockchain technology. It provides a one stop platform for all industry players to increase efficiency and optimize the utilization of EPA/FTA between countries.



# What is TradeWaltz?

Cross-Industry consortium (established 2017) for paperless international trade

	Participating Companies (as of March. 2020)
Banks	MUFG Bank, Ltd.
	Sumitomo Mitsui Banking Corporation
	Mizuho Financial Group, Inc./Mizuho Bank, Ltd.
Insurance Companies	Tokio Marine & Nichido Fire Insurance Co., Ltd.
	Sompo Japan Nipponkoa Insurance Inc.
	Mitsui Sumitomo Insurance Company, Ltd.
Cargo Owners	Sumitomo Corporation
	Mitsubishi Corporation
	Sojitz Corporation
	Toyota Tsusho Corporation
	Marubeni Corporation
	Itochu Corporation
	Kanematsu Corporation
	Mitsui & Co., Ltd.
Carriers / Logistics Companies	Kawasaki Kisen Kaisha, Ltd.
	Nippon Express Co., Ltd.
	Nippon Yusen Kabushiki Kaisha
	Ocean Network Express Pte. Ltd.
Secretariat	<b>NTT DATA</b>

## Activities (2017)

- Identification and sharing of cross industrial business issues
- 55 features, 83 API builds
- Proof of concept with NTP Singapore

## Activities (2018)

- Research on AI and semantic technology for L/C document check
- Proof of concept in Japan and Thailand
- Research on relevant laws (MLETR) and submission of written request to government agencies

## Activities (2019)

- Release of pilot version
- Trial deployment in Thailand involving 24 companies

## Activities (2020)

- Exposure at World Economic Forum 2020 sideline event
- Preparation for full commercialization

# Goals of TradeWaltz : Create an ideal digital trade platform

## 1 Cross Industry Platform

Players:



Exporter



Negotiation Bank



Issuing Bank



Importer



Insurance Company



Forwarder



Carrier



C/O provider

## 2 Wide coverage of documents

Structured documents **(NOT PDF)** on the platform



Letter of Credit



Invoice



Sea Way Bill



Packing list



Shipping Instruction



Export Permit



Certificate of Origin



Bill of Exchange



Insurance Policy

And attachment files (PDF etc.)

## 3 Creation of ecosystem

Utilize the accumulated data stored in the trade platform to create new business ecosystem.

# Benefits of Trade Digitalization

In the COVID-19 pandemic, digitalization is needed more than ever before.

Digitalization of trade procedures has many benefits as follows:

- **Cost reduction and increase in operational efficiency**
  - Reduce the costs of keeping paper in the storage and cut the delivery cost of paper.
  - Prevent incorrect data entry by introducing system check.
  - Make it easier to input data and modify documents by reusing already inputted data in the previous transactions.
- **Prevention of illegal acts**
  - Prevent double financing by managing the financing status on the platform.
  - Protect documents from falsifying/tampering by using blockchain technology to ensure document originality and access control features to restrict document sharing.
- **Simplifying data management**
  - Simplify data management by accumulating data on the platform with high level of security.
- **Other benefits**
  - Maximize the benefits of FTA/EPA with the traceability features on the platform which ensures certificate of origin.



# Benefits of Trade Digitalization

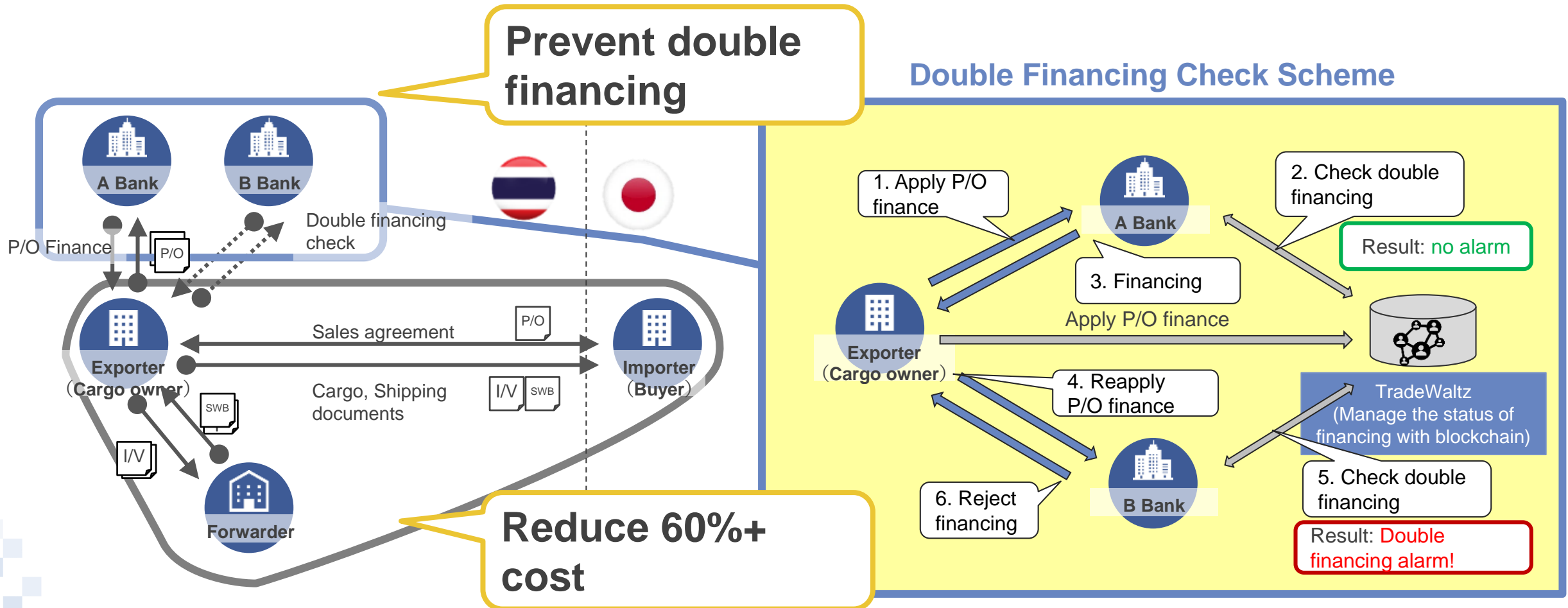
Based on the result of the cross-industrial POC in Japan, TradeWaltz confirmed that it contributes to the improvement of operational efficiency and cost reduction.

Industries	Procedures	Contribute to Cost Saving
Cargo owners	C/O application	<b>60+%</b> Time saving by creating documents with I/V data
	Apply for negotiation of documentary bill	<b>60+%</b> Time saving by confirming integrity of documents with check function
Banks	Negotiate documentary bill	<b>60+%</b> Time saving by confirming integrity of documents with check function
	Deliver documentary bill	<b>30 to 60%</b> Time saving by delivering documents to customers
Insurance Companies	Issue insurance policy	<b>30 to 60%</b> Cost saving by managing original documents
		<b>60+%</b> Time saving by creating I/P with L/C data
Carriers/ Logistic Companies	Issue SWB (B/L)	<b>60+%</b> Cost saving by paperless policy delivery/management and collection cost saving when revising I/P
		<b>60+%</b> Reduction of B/L operation by paperless SWB(B/L)



# Benefits of Trade Digitalization

Based on the result of the PoC with Thailand stakeholders, TradeWaltz proved it does not only reduce cost, but also **prevent double financing**.



# Our initiatives in ASEAN countries

July to October 2019, we conducted trial activity in Thailand with 24 companies.



Hironari Tomioka, President and CEO of NTT DATA Thailand, said the benefits of using electronic documents for international trade were examined by 47 trial participants from 24 cross-industry companies including Thai bank, forwarder, importer, insurer and certificate of origin providers and

Trade documents such as sea waybills, certificate of trade finance documents and

"Production costs and document processing

information sharing to prevent the ill-effects of financing from mu

company plan cooperation with l

2017, NTT DATA a cross-industry co-insurance company shared a mutual in

Bangkok Post

THAILAND WORLD BUSINESS OPINION AUTO LIFE LEARNING VIDEO MORE

## Business forum maps out digital future

*New trading platform roll-out set to make bloc's businesses more efficient*

PUBLISHED : 4 NOV 2019 AT 05:30

NEWSPAPER SECTION: NEWS  
WRITER: PHUSADEE ARUNMAS



# The Requirements of Digital Trade Platform

We think digital trade platform should comply with the following requirements.

- **Interoperability with other platforms**

- To ensure interoperability and connectivity with players using other platforms.

*We comply with UN/CEFACT message format.*

- **Small and Medium Enterprises involvement**

- To include small and medium-sized companies as well as large enterprises

- **Independent business operation for every participating country and fairness in data governance**

- To create an independent business development and operation according to each country's market needs and to enable fair data governance where the ownership of data is not limited to big players.

# TradeWaltz Initiatives in ASEAN: Exposure at WEF 2020 sideline event

In addition to digitalization, a trade platform should emphasize the importance of interoperability with different platforms. For this reason, we are working with International Chamber of Commerce (ICC) and Singapore's Infocomm Media Development Authority (IMDA) and conducted a signing ceremony highlighting the importance of interoperability between platforms, on the sideline event of World Economic Forum (WEF) 2020.

## International partners ink pact with IMDA to collaborate on digital trade

THE International Chamber of Commerce (ICC) and 17 major multinational firms have signed a cooperation agreement with Singapore's Infocomm Media Development

Authority (IMDA) to boost Singapore's TradeTrust f

Signed at Davos on Wednesday, the agreement will create a system for world trade to adopt open and neutral interoperability.

Moving towards digitalising trading system, and international noted Minister for Communications Digitalisation Forum. The

TradeTrust aims to ensure allowing digital trade doc

**SINGAPORE and ICC collaborate with seventeen key industry partners to enable further digitalisation in international trade**

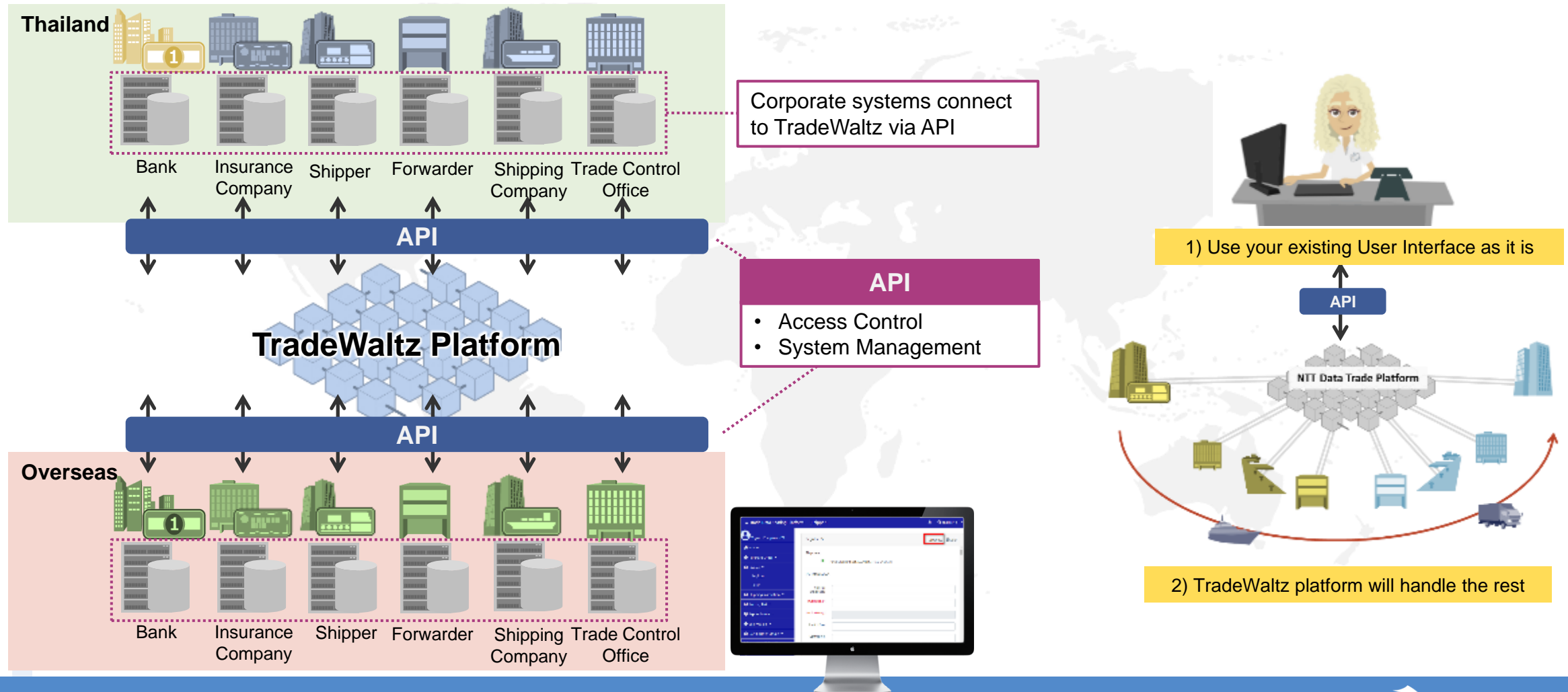




# Involvement of Small and Medium-sized Enterprises (SMEs)

TradeWaltz enables API connectivity with the companies' existing system.

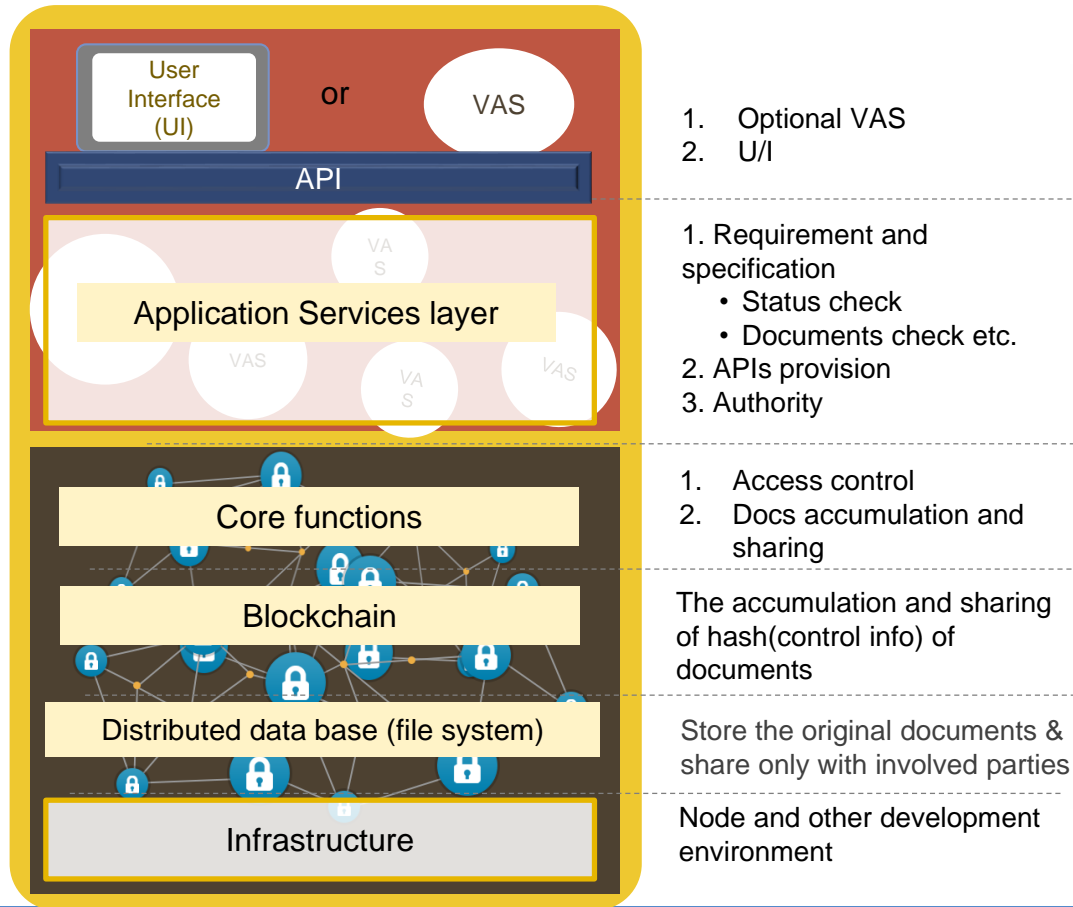
Small and medium-sized enterprises can also connect to TradeWaltz through the 3rd party vendor or direct access to web interface.



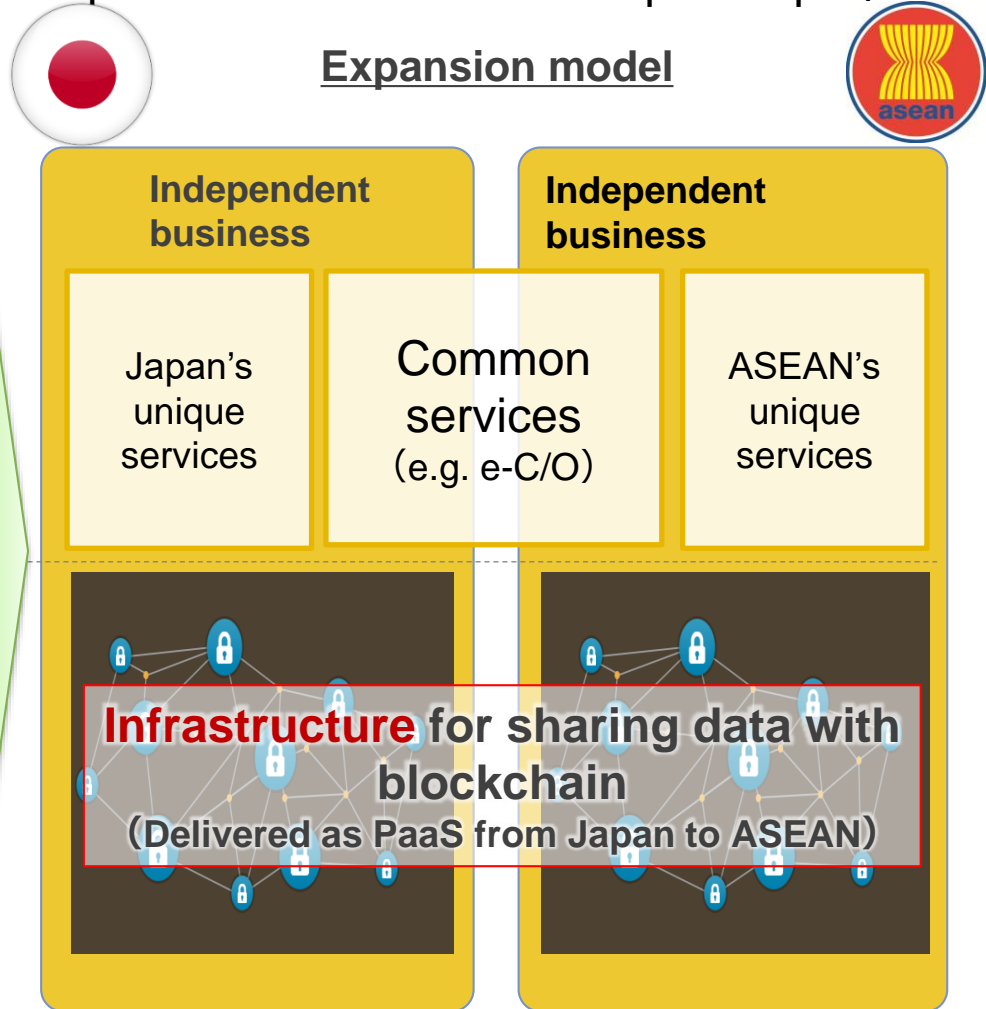
# Independent operation for every participating country and ensure fairness in data governance

TradeWaltz realizes independent business development and operation which satisfies each country's market needs. It also enables the fairness in data governance where the ownership of data is not limited to specific players.

## TradeWaltz Structure


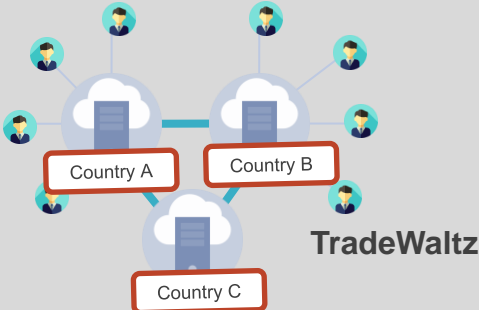
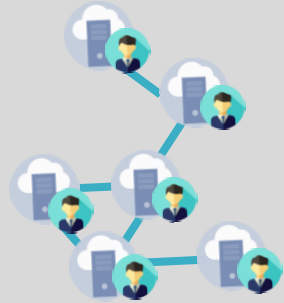


## Expansion model



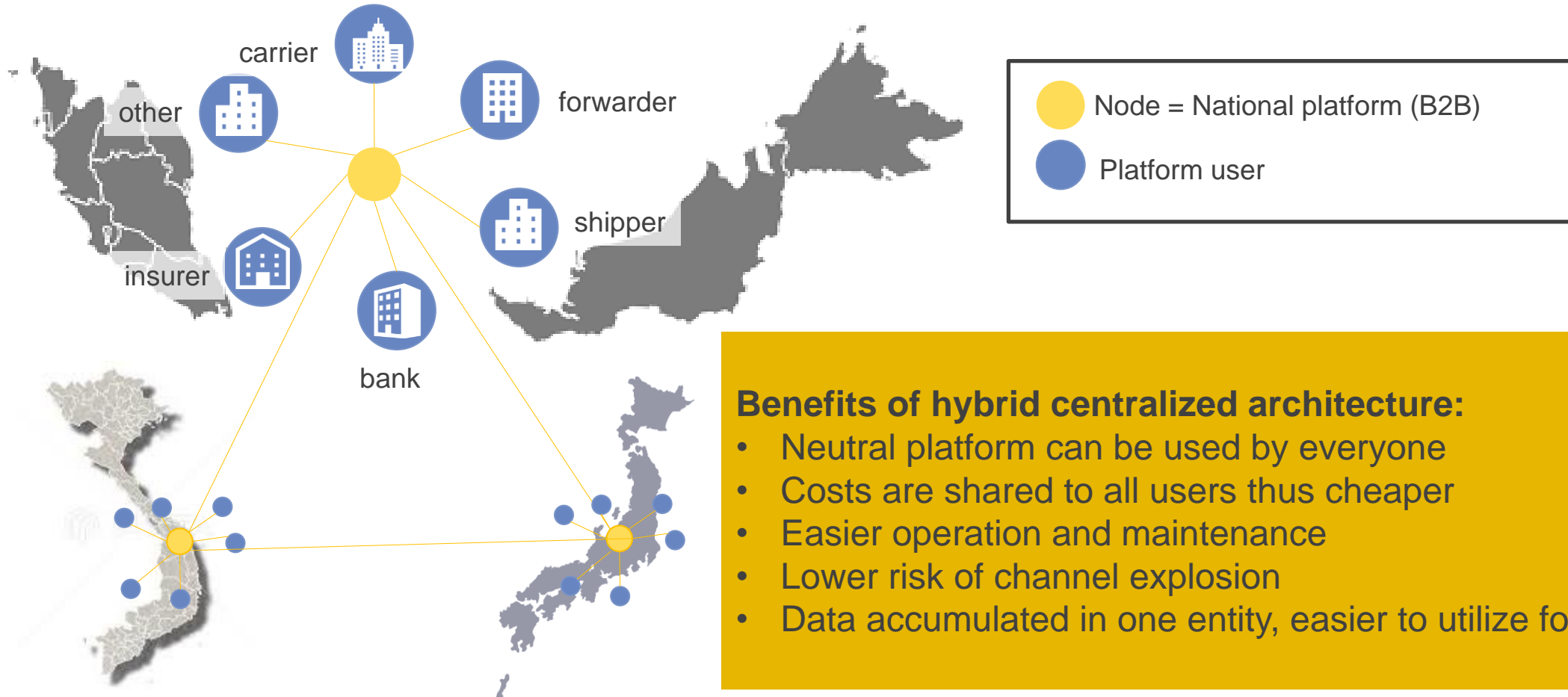
# Category of Trade Platforms

There are many trade platforms, but most of them have issues.  
TradeWaltz architecture solves those issues with “Hybrid” model.

Centralized	Hybrid Centralized - P2P	Pure P2P
 <p>Ordinary system</p>	 <p>TradeWaltz</p>	
<ul style="list-style-type: none"><li>• One owner</li><li>• All participants (countries) access the same data center in a specific country.</li><li>• Need to make consensus of where data center to be located.</li></ul>	<ul style="list-style-type: none"><li>• One owner for each country.</li><li>• Data are stored and managed in each country.</li><li>• Independent platform business in each country is possible.</li></ul>	<ul style="list-style-type: none"><li>• All participants are owner (Nodes investment are required to participate.)</li><li>• Data are stored and managed by every participant.</li></ul>

# Architecture of Our Platform

One node per country architecture offers the benefits of centralized and decentralized system (blockchain) technology.



## Benefits of hybrid centralized architecture:

- Neutral platform can be used by everyone
- Costs are shared to all users thus cheaper
- Easier operation and maintenance
- Lower risk of channel explosion
- Data accumulated in one entity, easier to utilize for big data etc.



# Issues and limitations of Blockchain Technology

Every blockchain platform has strength and weakness, that can be challenging to adapt in trade platform.

## Data management related issues

### Data Explosion

Past information can not be deleted

→Data capacity continues to expand

Depending on the range of target data traceability, data explosion deteriorates further  
(Attachment file etc.)

### Erasability of Personal Data

Difficult to control and deleting personal information related such as GDPR.

## Network related issues

### Channel Explosion (Fabric)

Access control by channel

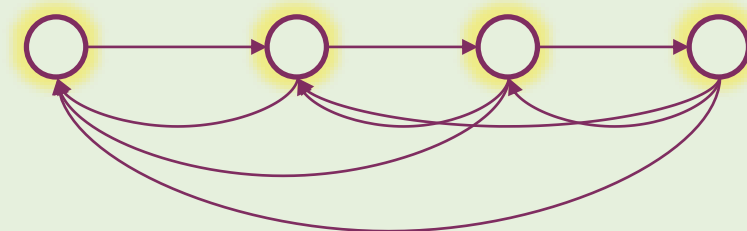
(Explosion from combination of up to 200 countries)

Channel definition, chain code arrangement for channels, data capacity, performance, etc.

When we control data access for up to 200 countries, the number of combination will be massive.

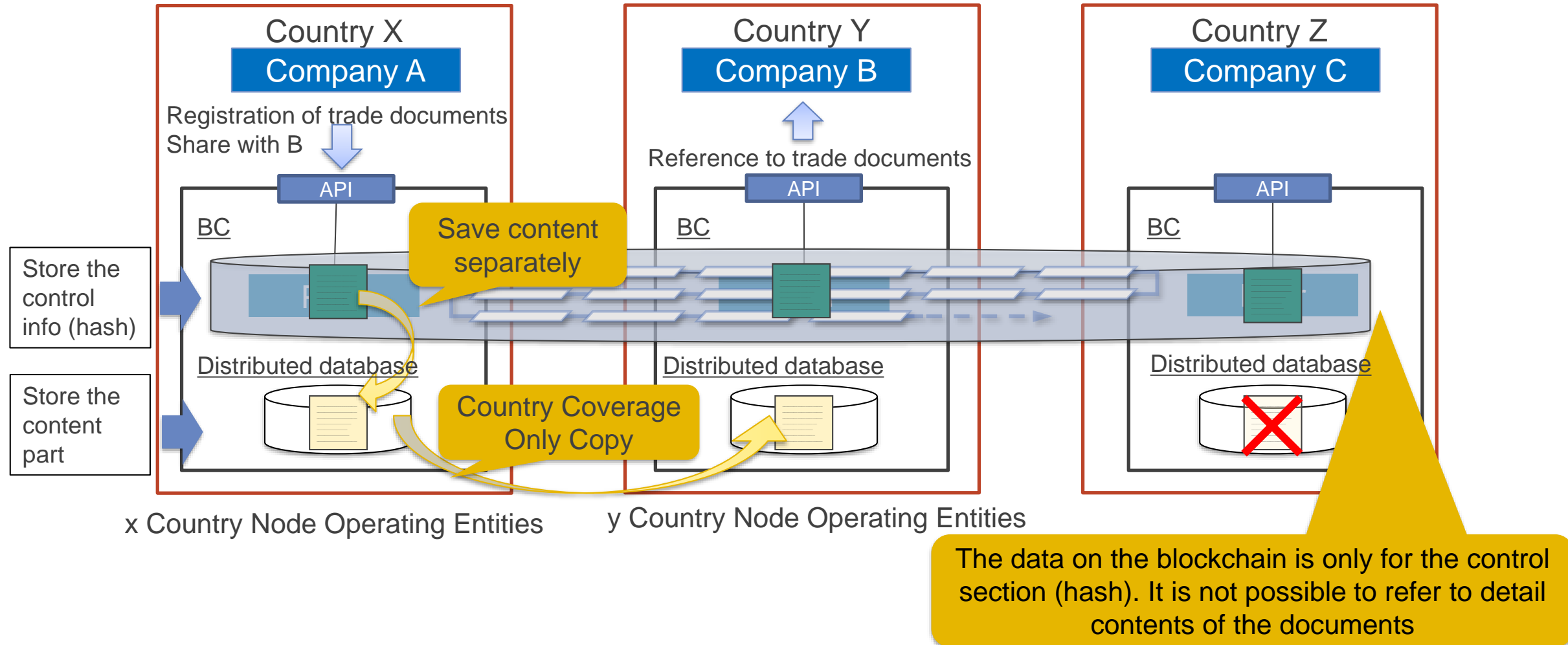
### Transaction Explosion (Corda etc.)

Transactions for sharing increase sharply as number of trading participants increase



# TradeWaltz Value Propositions – Node Deployment : Data privacy – Data sharing among related countries

NTT DATA's trade platform provides a mechanism for data to be shared only between relevant country in consideration of data sovereignty.



# Legal challenge

UNCITRAL Model Law  
(MLETR)

+

Electronic seal  
scheme from eIDAS

=

**LEGAL  
FRAMEWORK**

(+) aims to enable the legal use of electronic transferable records both domestically and across borders.

(-) individual states will have to decide whether to adopt the MLETR into their own law.

(+) the electronic seal is a piece of data attached to an electronic document or other data, which ensures data origin and integrity.

(-) only applicable in EU. Similar scheme applicable worldwide is necessary.



# Our Roadmap

TradeWaltz will start commercial service in 2020 and gradually expanding its services

4

**100% paperless trade**

3

**Connect to overseas platform  
2020~**

ASEAN RDTC, Thailand, Singapore, etc.

2

**Connect to Japanese Single Window**

1

**Start service - 2020**

Expand users; consortium members, third party, MSME, others.

Expand services; introduce new features gradually





- TradeWaltz web site  
<https://www.tradewaltz.com/en/>
- TradeWaltz introduction video  
[https://www.youtube.com/watch?v=y\\_-d9DBM0CQ](https://www.youtube.com/watch?v=y_-d9DBM0CQ)