



## **Blockchain Solutions**

*For the global supply chain*

# **TBSx3 Pty Ltd**

Three Layers of Protection – *"to be sure"*



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## TBSx3: overview

- TBSx3 = To Be Sure \* 3
- Founded in 2016 & privately funded
- Blockchain start-up in supply chain & logistics
- Specifically E2E traceability & provenance
- Address sustainability, food safety and counterfeit
- Launched global blockchain consortium in Q1 2018
- Set up successful trials in Q2 2017
- Blockchain team in Sydney (AUS) and Penang (MY)
- Open office in Europe and US in 2018



# Validated TBSx3 Pilots

## Lead Partner



- Lead partner for TBSx3's initial shipping trial
- Globally, DP World Group have 77 terminals on 6 continents
- By 2020, the group intends to handle ~100 million containers per year



## International Companies



- Hamburg Sud and DB Schenker also agreed to work with TBSx3 on the trial
- DP World Group introduced DB Schenker, a major trucking business that serves the DB World Group internationally
- Hamburg Sud transported the container from Melbourne to China
- DB Schenker carried containers from DB World's port in China to the distribution warehouse

## Industry Support



- Ius Wines, a Coonawarra-based global wine company, was also a participant in the trial
- The trial involved the shipment of Ius wine in a container from Coonawarra through the entire trade logistics system and in the distribution system in China
- Visy have also expressed interest in partnering with TBSx3





## Huge numbers!

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- 650 million TEU's shipped annually & top 20 ports cover 50%
- 5 billion pallets annually & 5000 container ships globally
- About 25 million containers
- Chinese ports handle almost 200 million TEU's
- Australian ports total of 5 million TEU's



## Media Coverage

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## Industry Links

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## 澳洲比特币交易所参加政府支持的区块链代表团访问纽约

澳大利亚政府派出一个26人代表团——其中包括比特币交易所和区块链初创公司，去纽约参加Consensus 2017（2017年共识大会）——行内的一个著名盛会。

[Read Full Article](#)


## 호주 TBSx3, 위조품 처리를 위한 Blockchain Trial 완료

호주 블록 체인 회사 인 TBSx3는 가짜 제품 문제를 해결하기 위해 혁신적인 기술로 가장 큰 시험을 성공적으로 마쳤습니다.

[Read Full Article](#)

# 简书

## 区块链+币圈晚报5.23

CoinDesk的“2017年共识”汇集了全球各地的企业、政府人员和项目经理，可说是全球性区块链业界大佬云集的会议，大家在这儿探讨各种可能性和行业中存在的问题，一些政府和企业也可以通过会议了解各种项目来获得适合自己的区块链解决方案。

[Read Full Article](#)


## 区块链科技企业TBSx3与港口物流企业合作打击假药供应链

金色财经讯-澳大利亚区块链科技企业TBSx3与港口物流企业1-Stop Connections达成合作协议，合作将区块链技术集成到港口安全架构中，组织假冒药品流动到市场中。

[Read Full Article](#)


## 澳大利亚：官方区块链代表团访问纽约

近日，澳大利亚政府派出一个包括比特币交易所和区块链初创公司成员的26人代表团去纽约参加2017年的区块链行业著名盛会。

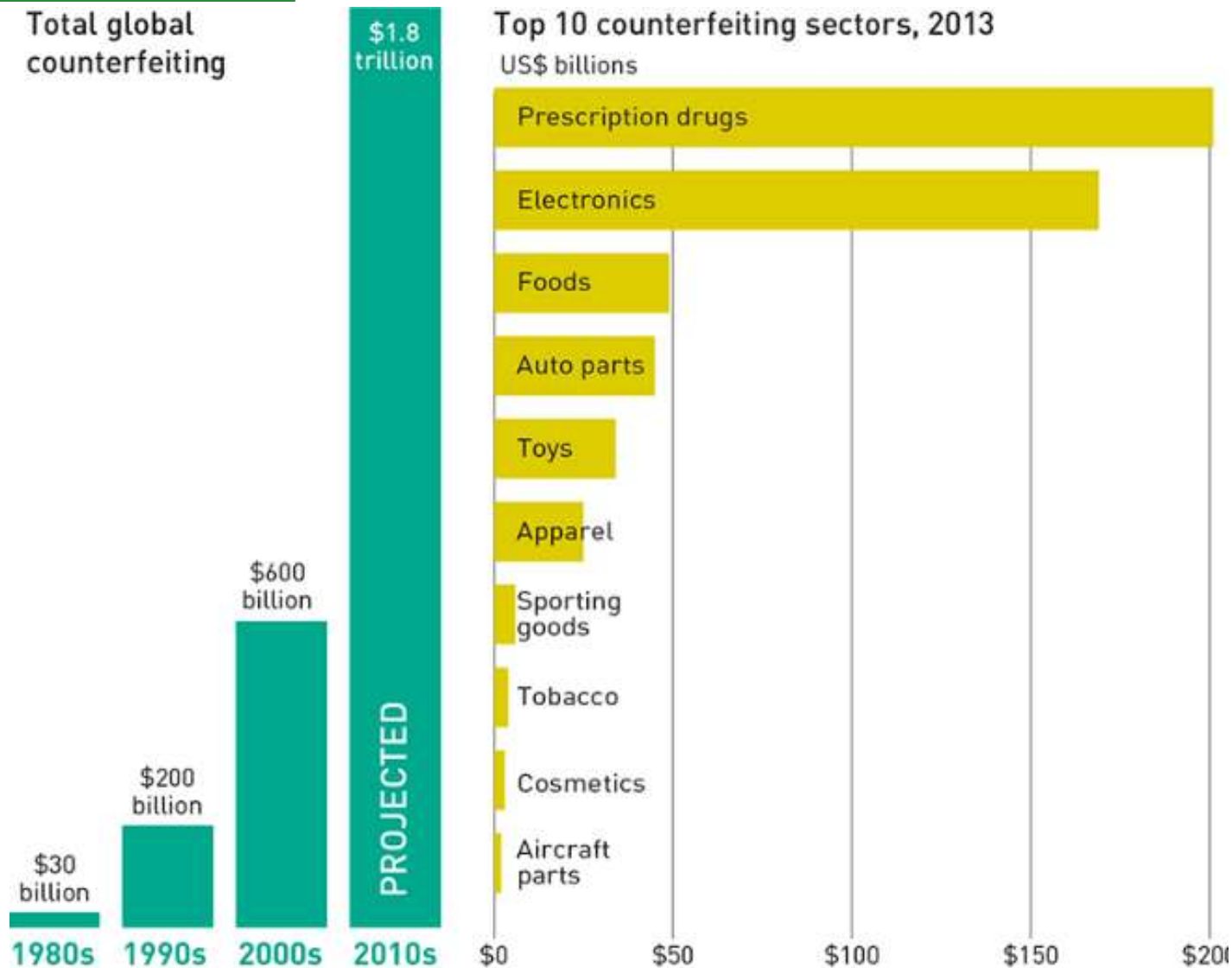
[Read Full Article](#)


호주 정부는 뉴욕의 비트 코인 및 블록 체인 컨센서스에 비트 코인 교환 및 블록 체인 신생 기업을 포함하는 26 명의 호주 대표단을 뉴욕으로 파견한다.

호주 정부는 유명한 업계 행사 인 뉴욕의 비트 코인 및 블록 체인 컨센서스에 비트 코인 교환 및 블록 체인 신생 기업을 포함하는 26 명의 호주 대표단을 뉴욕으로 파견한다.

[Read Full Article](#)

# Fraud and counterfeit



**Source:** NetNames, "The Risks of the Online Counterfeit Economy," 2016; NetNames, "Counting the Cost of Counterfeiting," 2015; Strategy& analysis

## Fraud and counterfeit



- Increasingly complex and fragmented food supply chains
- FDA defines EMA as the “fraudulent, intentional substitution or addition of a substance in a product for the purpose of increasing the apparent value of the product or reducing the cost of its production.”



## Fraud and counterfeit

### Food fraud prevalence increasing

- Global Food fraud ~ \$50 billion (3)
- 10% US food adulterated (4)

#### Not what it seems

Source: West Yorkshire Joint Services



Contained flame retardant



Slimming tea made with a banned prescription drug



14 samples of mince contained different species plus one with a rabbit bone



Contained anti-freeze



Cupcakes with non-edible glitter made from plastic film



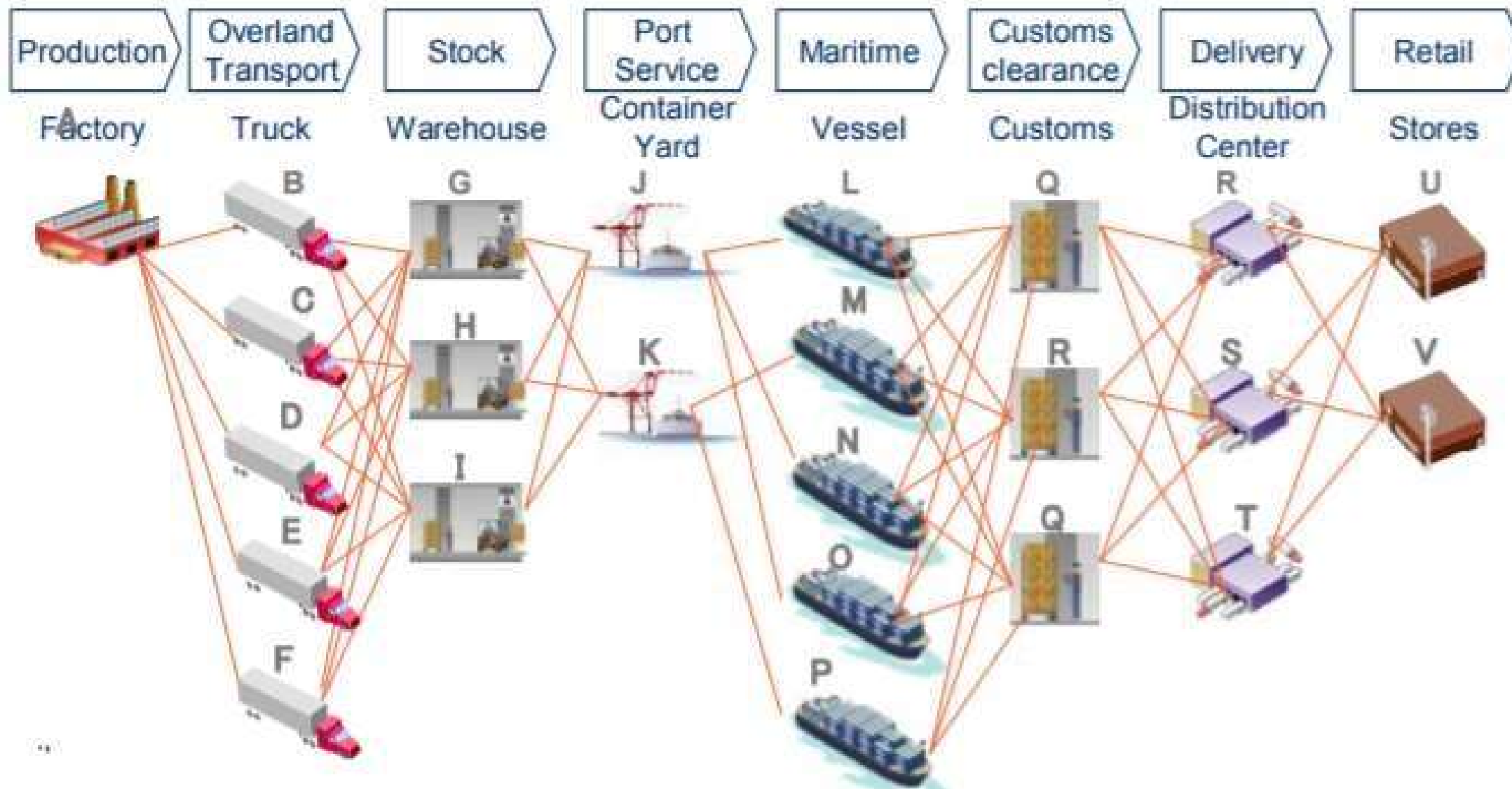
On a pizza was found to be poultry



Mozzarella contained only 40% cheese

## AS IS: Opaque, silo-based supply chains

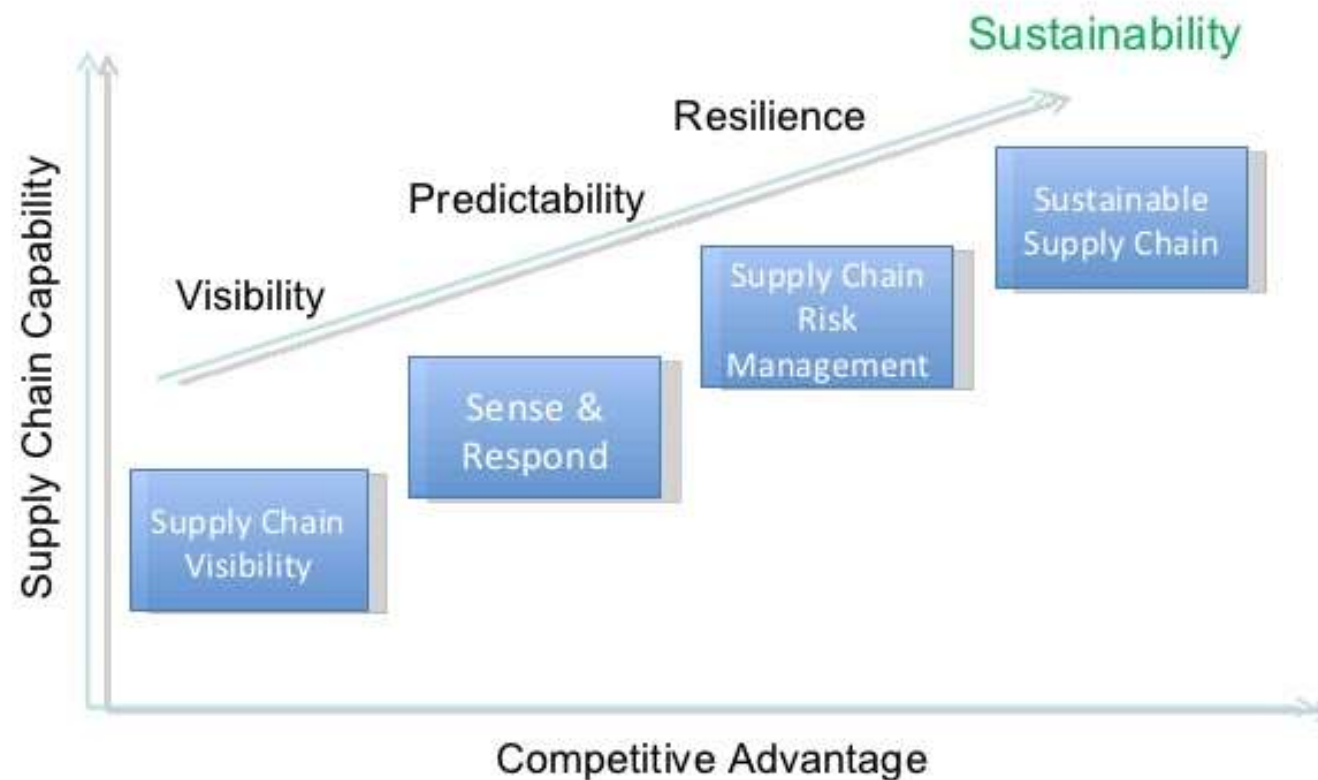
The many different companies in the whole supply chain network use different computer systems...



# TO BE: Transparency leads to sustainability



## SUSTAINABLE Supply Chains



# TBSx3 solution strategy



# 1<sup>st</sup> Layer: Tokenization on blockchain

## What is tokenization?



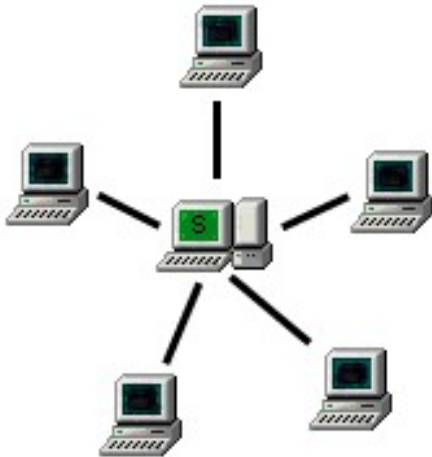
- Tokens represents trade items & logistic units
- Every token is encrypted
- Every token is unique
- Every token can be transferred using public & private keys
- Every token can be aggregated



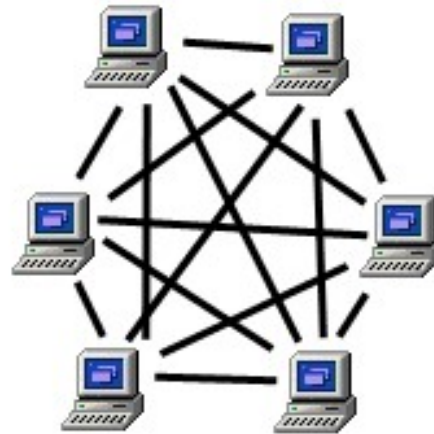
# 1<sup>st</sup> Layer: Tokenization on blockchain

## What is blockchain?

Server Based Network

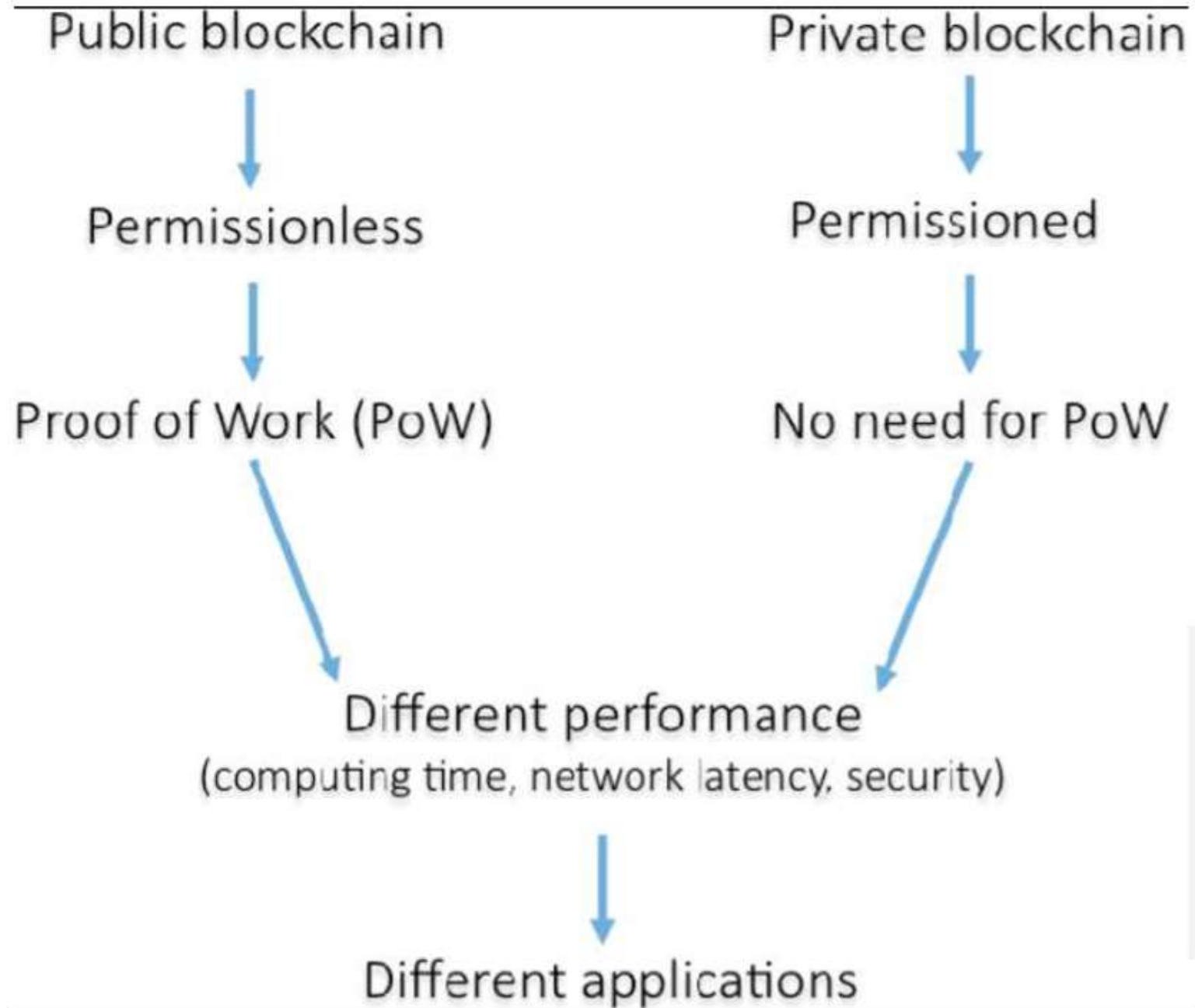


Peer to Peer Network



- Timestamped archive of token transactions
- Data can only be appended NOT edited
- Every participant owns full copy
- Data is protected and (near) immutable through chains
- Decentralized data validation through consensus
- Smart contracts or stored procedure automate manual processes
- Benefit of immutability for insurance and accountability

## 1<sup>st</sup> Layer: tokenization on blockchain



## 2<sup>nd</sup> Layer: encrypted serialization

Serialization involves printing a unique code on every individual saleable trade item and [potentially] all shipping/logistics labels.

### Data Matrix

- 2 dimensional
- Small footprint
- Image reader decoded
- Widely adopted by pharma



GTIN 00314141999995  
SN 10000000234  
EXP 25 JAN 2015  
LOT 987654321GFEDCBA

### Code 128 Barcode

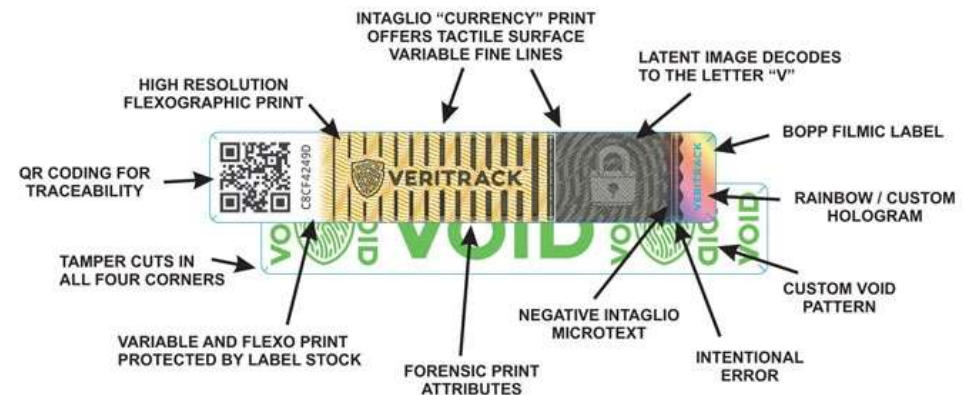
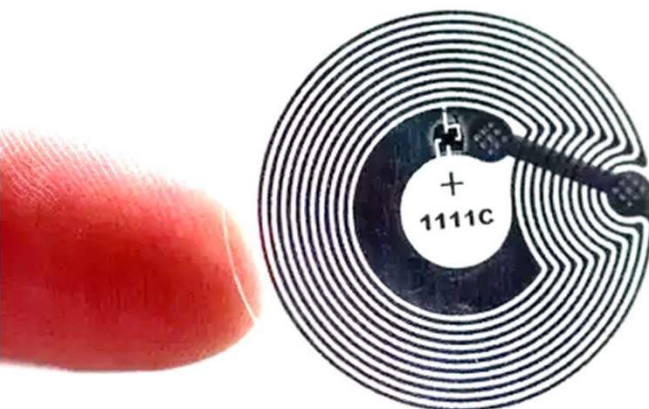
- 1 dimensional
- Larger footprint
- Widely supported in supply chain by laser scanners



(00) 123456789012345675

### QR Code

- 2 dimensional
- Smaller footprint
- Image reader decoded
- China and baby formula

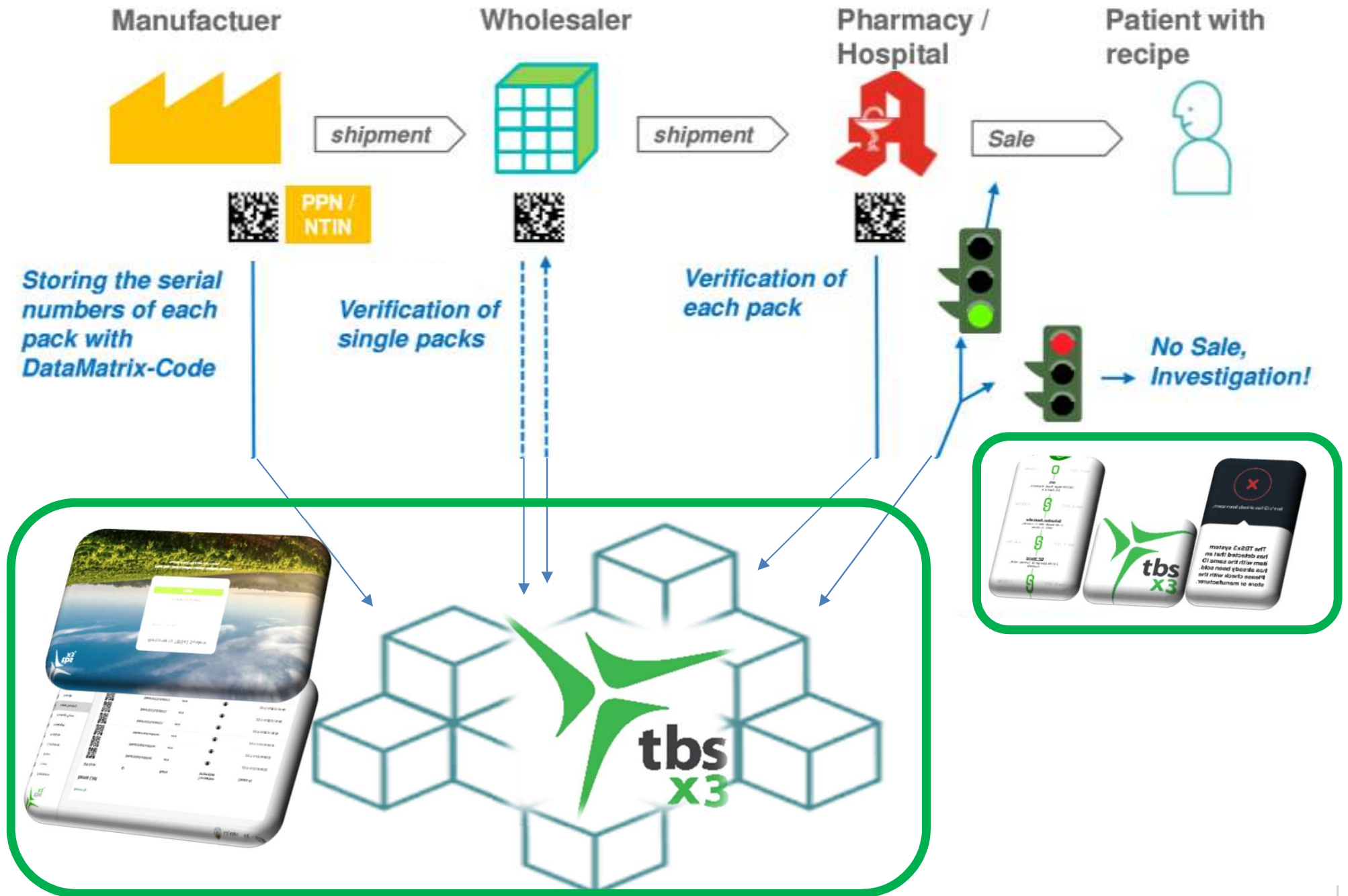




## 3<sup>rd</sup> Layer: Logistic Artificial Intelligence (AI)



# Pharmaceutical supply chain



## Apps in Chinese

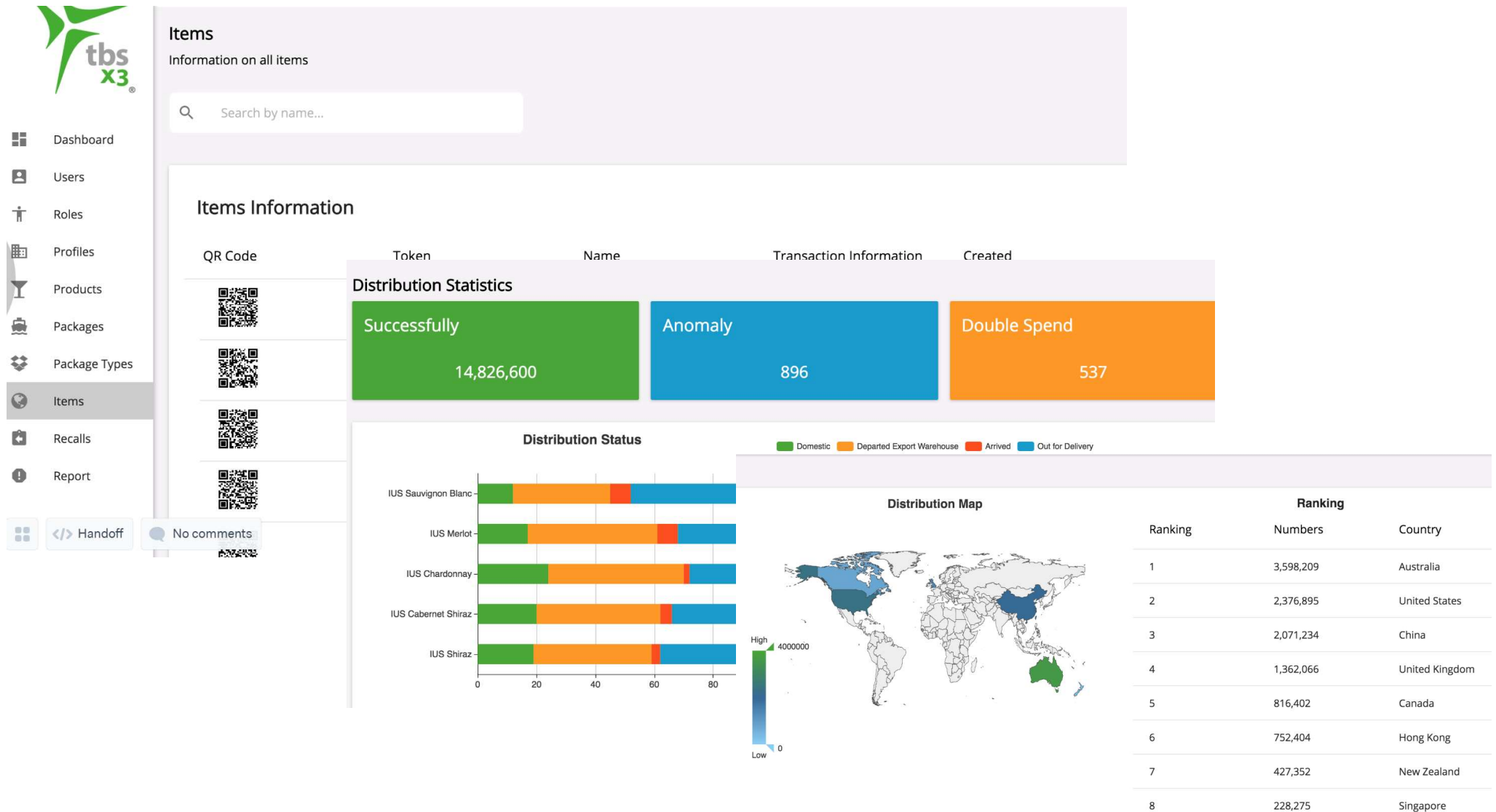
- Smartphone apps to transfer items in supply chain
- Smartphone apps for retailers and consumers in Chinese
- Empowers consumers to scan for authenticity and check provenance
- Protect your brand against counterfeit



# Proven solution



- Control supply chain





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