

Blockchain for cross-border shipments

Proof of Concept



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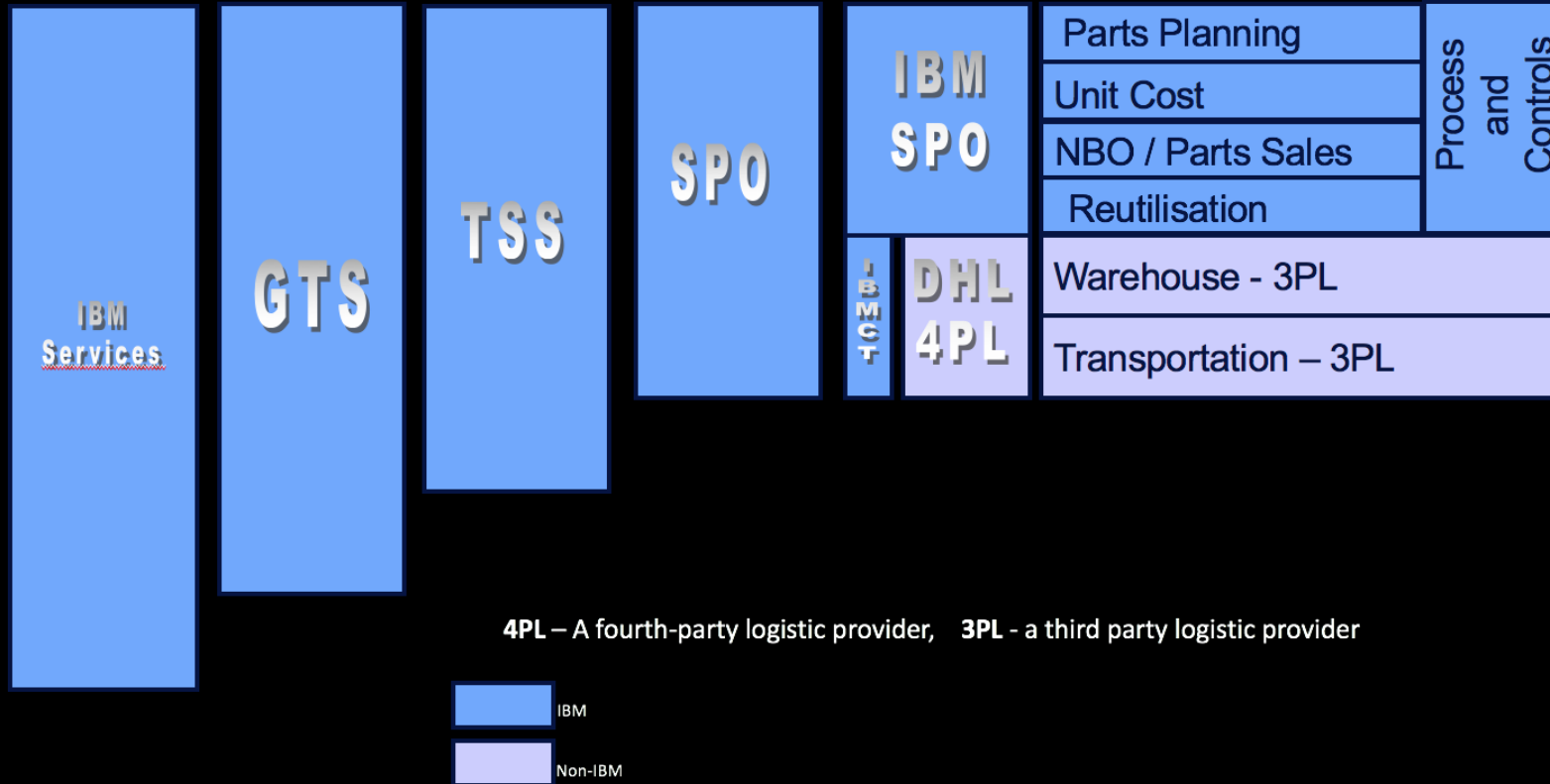
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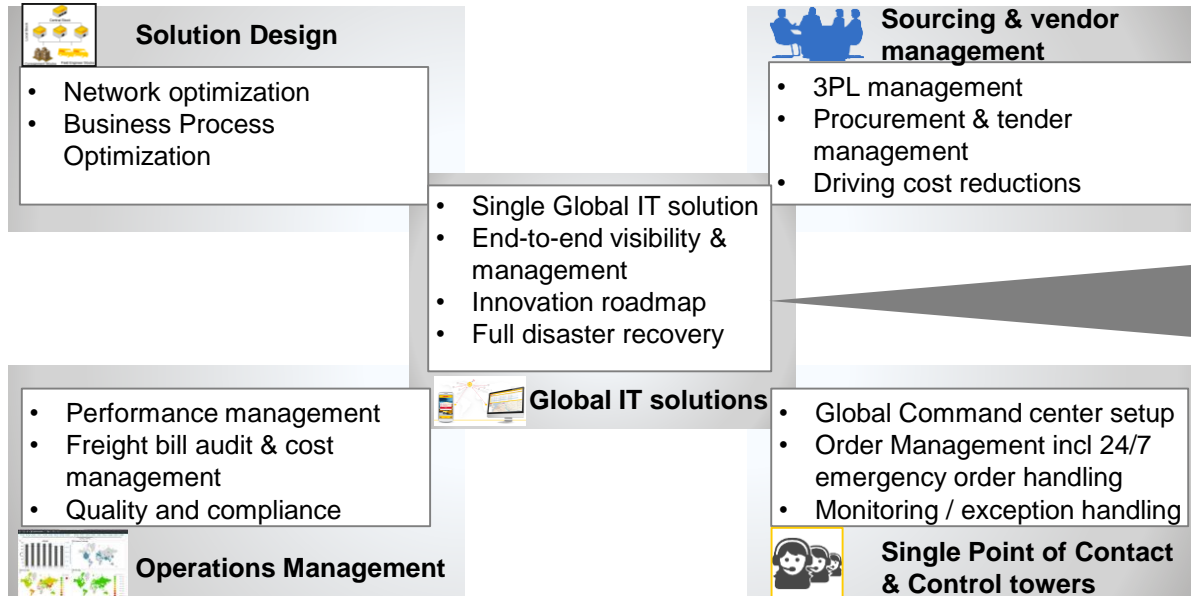
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SERVICE PARTS ORGANISATION - WHO ARE WE?



DHL –Lead Logistics Partner for IBM Service Parts Operations

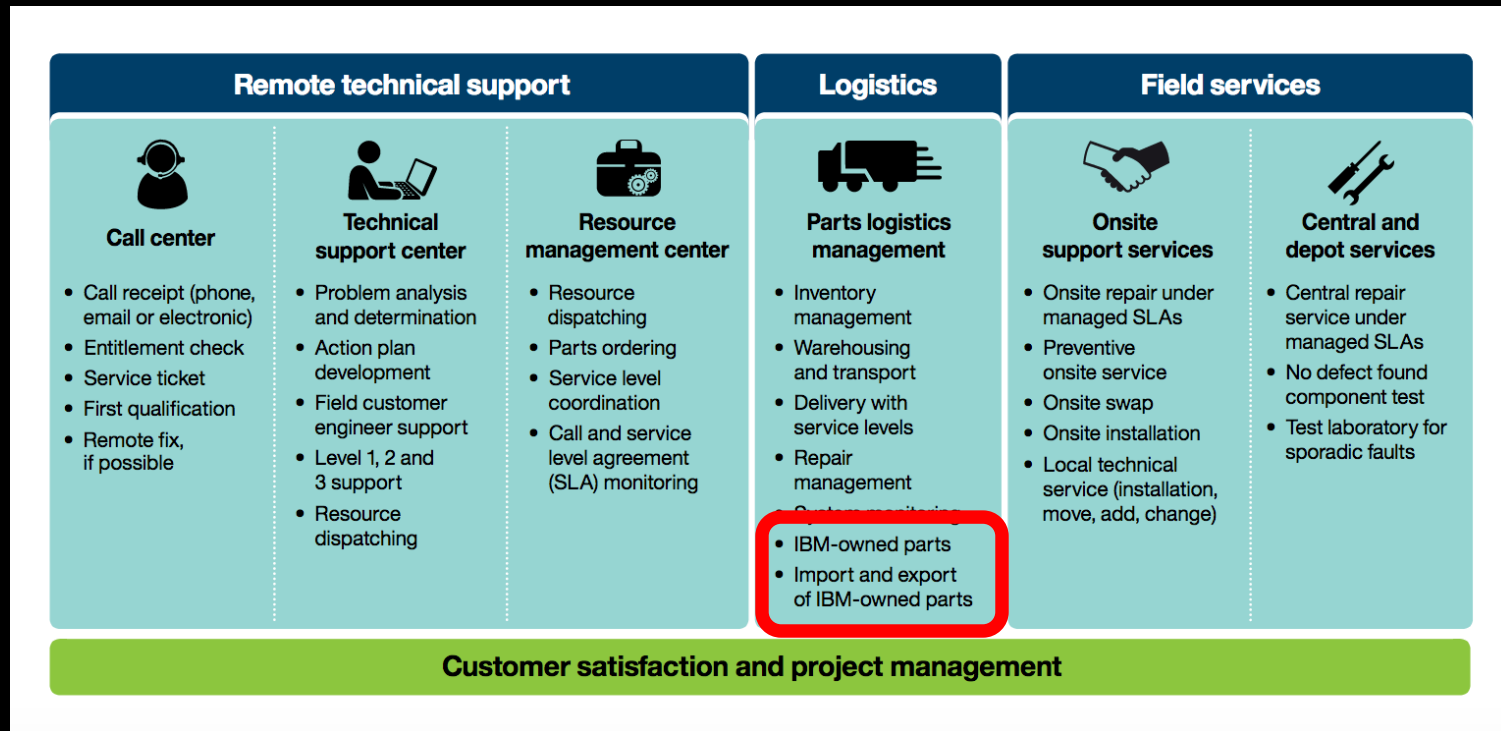
DHL's 4PL organization is operating independently of 3PL to manage the supply chain network and create value for IBM through 4 operational focus areas supported by global IT solutions



The global IT solution enables a **transformational approach** and means there is a **innovative partnership** with IBM where we actively explore how **digitalization** can change and improve the supply chain



IBM TSS : SUPPORT AS A SERVICE



SPO VALUE PROPOSITION

Bid Coordination

- Single task id
- Delivery model selection
- Source allocation
- SPP involvement
- Service Planning involvement



Parts Management System

- Spare parts supply chain expertise
- Interlock Service Planning
- Interlock Service Parts Procurement
- Interlock LLP
- Inventory optimization



Parts Delivery service

- Serviceability requirements
- Availability requirements
- Replenishment requirements
- Performance monitoring
- Reliability monitoring



Facts & Highlights

- 3 worldwide hubs
- 200,000 part numbers (50,000 non-IBM)
- 30 million movements a year WW
- ± 400 parts suppliers
- >750 stock locations WW (180 countries)
- 96% availability in 58 countries
- 99.9% inventory accuracy
- SLA support from 2hrs to 2nd business day
- Transport / warehousing has been outsourced
- Globally managed and integrated processes and systems where possible, geographical solutions where needed

Bid management

- Supplier coordination
- Inventory sharing
- Delivery optimization
- Prioritization



Control Tower

- Day-to-Day operation
- Process monitoring
- Process improvements
- Usage & Re-ols analysis
- Project status & information
- Escalations



Competence Centre

- Solution design
- Benchmark
- Strategic modeling



Implement

- Business awarding
- Contract adaptation
- Process customization
- Infrastructural adjustments
- Operational education



- Supply chain problem determination
- Problem resolution
- Supplier escalation



Business Controls

- QMX/ISO documentation
- Invoice verification
- Purchase Order management
- Scorecards
- Reporting



CUSTOMS INVOICE EXAMPLE

```

=====
===== INTERNATIONAL MAINTENANCE PARTS
===== LOGISTICS B.V.
===== JOHAN HUIZINGALAAN 765
===== 1066VH AMSTERDAM, THE NETHERLANDS
===== VAT NBR NL802265753B01
===== CHAMBER OF COMMERCE NBR 33255752
=====
=====

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INVOICE NUMBER
09/8/B331
DATE 11 09 18
DD MM YY

PAGE 1

INVOICE TO
INTERNATIONAL MAINTENANCE PARTS
LOGISTICS B.V., AMSTERDAM/NL
ERSATZTEILE, P.ADR.IBM SCHWEIZ AG
CHE-103.794.578VAT
8010 ZUERICH
SWITZERLAND

INVOICE TYPE	NO CHARGE
INVOICING CTY/LOC	697 09F
SHIPPING CTY/LOC	788 940
INVOICE TO CTY/LOC	697 09F
SHIP TO CTY/LOC	848 ND1

SHIP TO
IMPL B.V. BRANCH SWITZERLAND C/O
PROLOGIST AG FOR IBM SWITZERL. LTD
STEINACKERSTRASSE 56
DCS CE DELIVERIES ND1
8302 KLOTEN
SWITZERLAND

SELLER"S VAT ID BUYER"S VAT ID
NL802265753B01
DATE OF SUPPLY
11/09/18

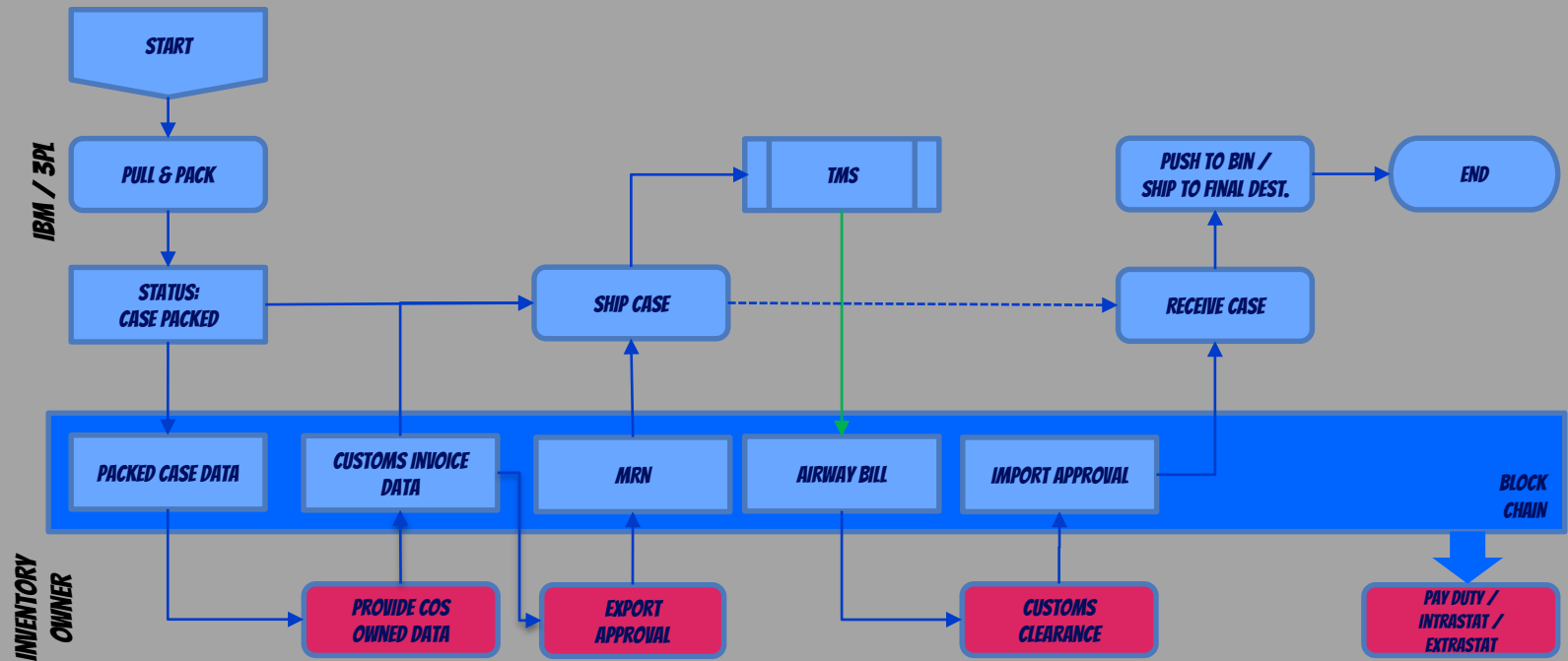
C.E. EMERGENCY A

IDDE TRANSMITTED
METHOD OF TRANSPORT: AIR
DELIVERY TERMS: CPT - SEE SHIP TO ADDRESS

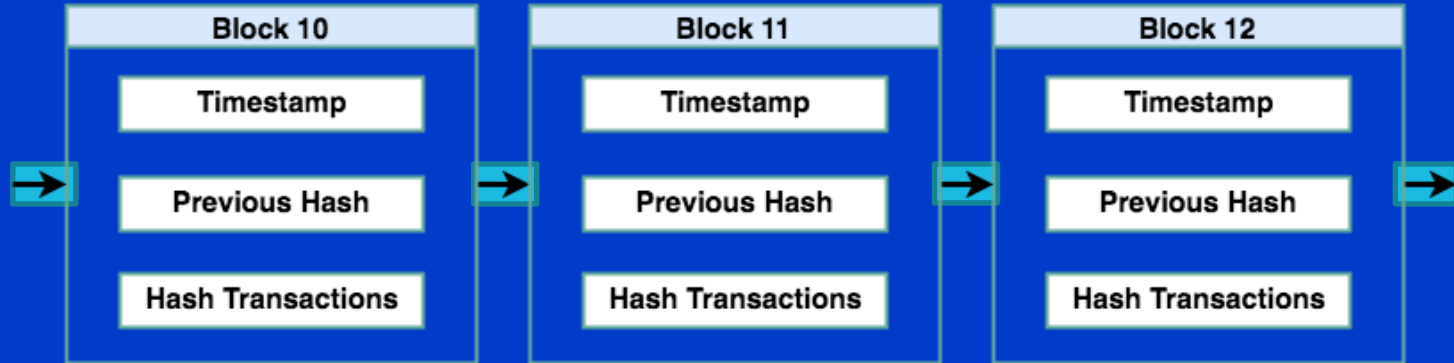
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ORDERNO	FULL DESCRIPTION DESCRIPTION IDENTIFICAT	CoO	UoM	QUANTITY	UNIT PRICE EUR	AMOUNT EUR
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HS CODE: 8471705000						
DISK DRIVE, HARD, M						
422626	HARDDISKDR	ND143	856	01 2	336.2200	672.44
				CASE TOTAL		672.44
CASE NO. 940PN62655800						
HS CODE: 8507208090						
BATTERY, LEAD-ACID STORAGE, NON SPILLABLE, OTH (NR PER IAT						
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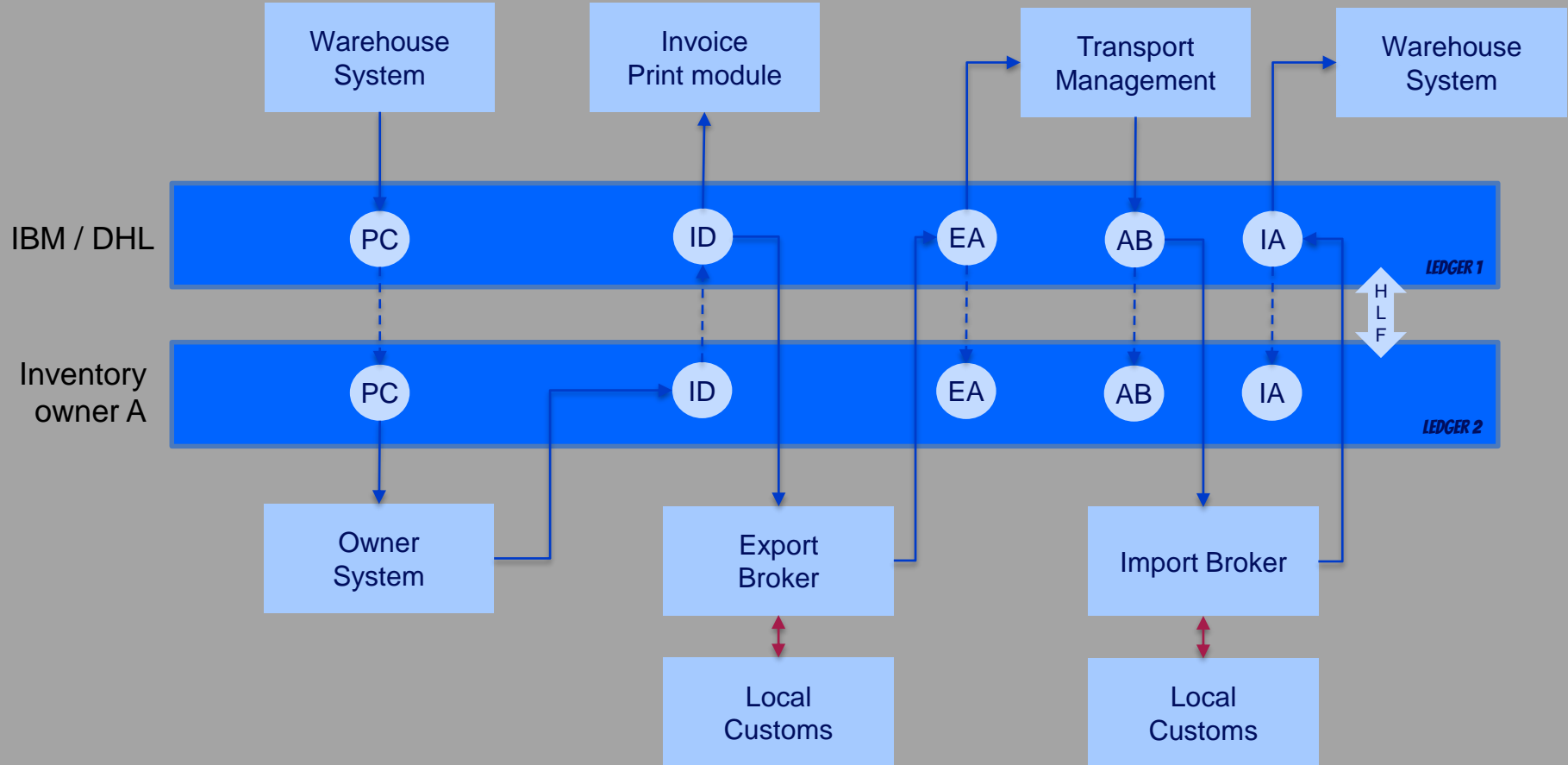
CROSS BORDER FROM EMEA CB TO SPO SWITZERLAND



Registering a transaction on the blockchain uses a chain; tampering with data will break the chain



SHARED LEDGER ALLOWS FOR INCREASED TRUST IN DATA



ADVANTAGES OF APPLYING BLOCKCHAIN TECHNOLOGY

AUTOMATED DATA INTERFACES FROM / TO CLIENTS AND IMPORT/EXPORT BROKERS

VISIBILITY

***TO ALL ACTORS OF ALL
DOCUMENTS AS NEEDED
(PERMISSIONED
BLOCKCHAIN)***

24/7 ACCESS TO DOCUMENTS

AUDITABILITY AND TRUST

***MODIFICATION OF DATA NOT
POSSIBLE WITHOUT DETECTION***

- ***CLEAR LIABILITY IN CASE OF
CUSTOMS DISPUTES***
- ***CUSTOMS MAY WANT TO HAVE
ACCESS TO THE DATA IN THE
BLOCKCHAIN IN THE FUTURE***

SCALABILITY

***MULTIPLE INVENTORY OWNERS CAN
BE ADDED EASILY***

FLEXIBILITY OF SMART CONTRACT

***DIFFERENT COUNTRIES HAVE
DIFFERENT REQUIREMENTS***

Thank you



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