



BLOCKCHAIN: From Proof of Concept to Implementation

Maritime Law Association Fall Meeting
October 2018



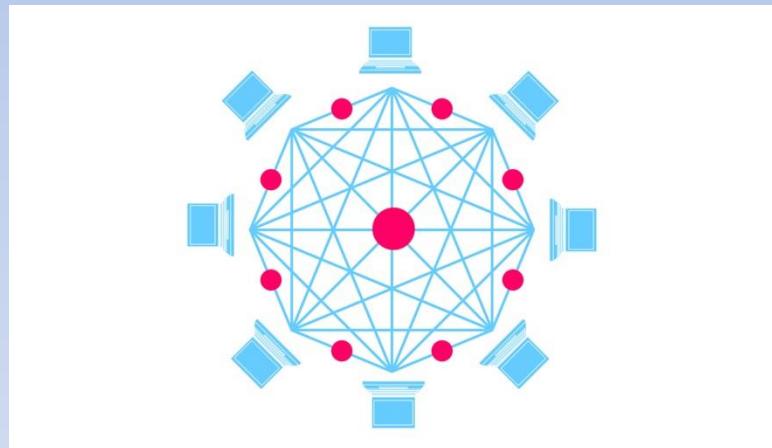
Basics of Blockchain

➤ Concept

- Decentralized database
- Peer – to – peer network
- Immutable data

➤ Goals

- Efficient and secure
- Transparency
- Auditable



Identifying the Challenge



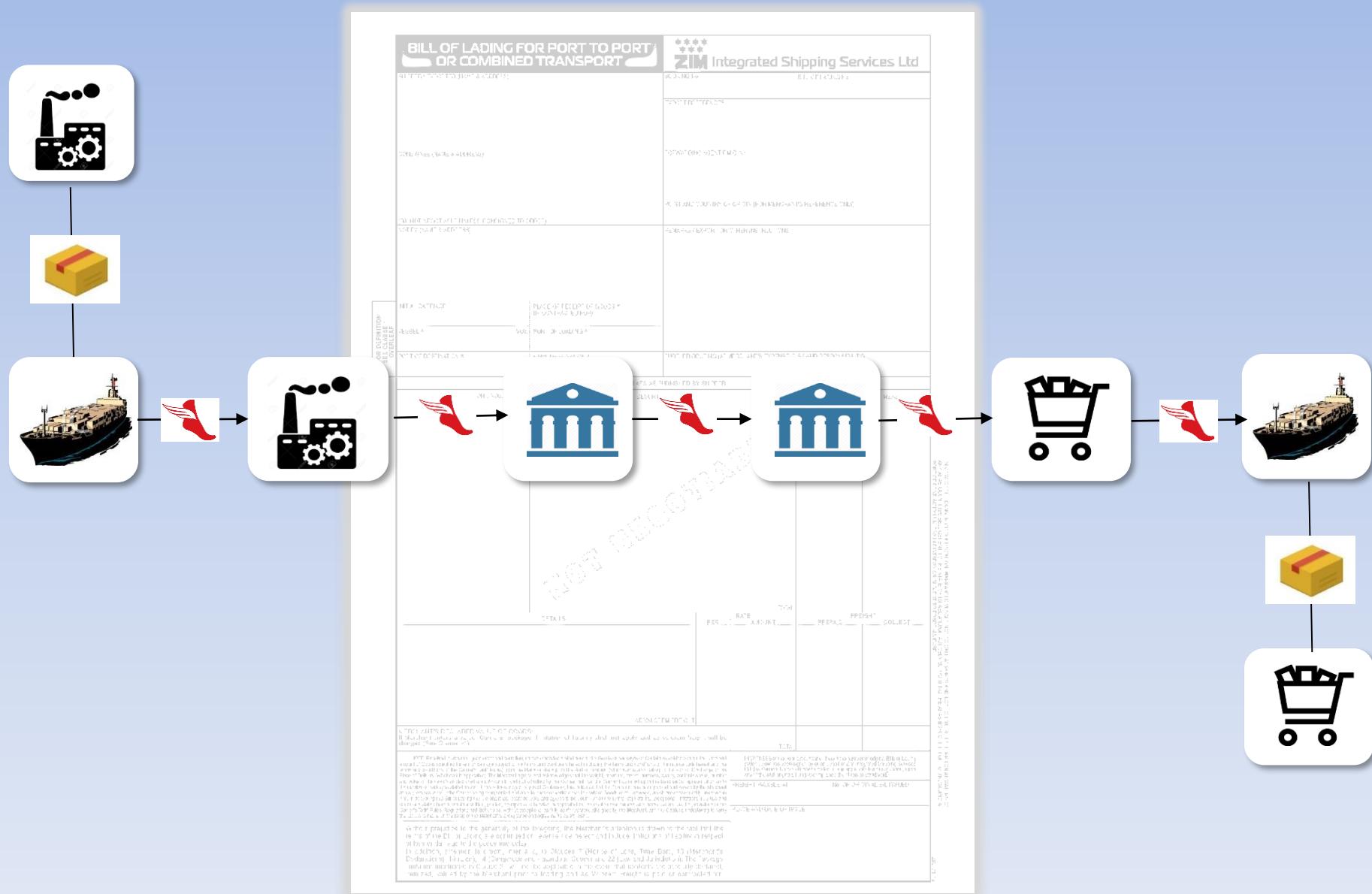
➤ Containerized Cargoes

- 1.8 Billion Tons
- ~146.3M TEU
- ~36.6M BoL

➤ Time and Cost

- Verification & Handling
 - \$100 – 200 / BoL
- Transfer and Handling
 - 2 – 5 Min / document

Bills of Lading – Issue to Surrender



Framework – Legal Regimes

- **US COGSA**
 - applicable to “*every bill of lading or similar document of title which is evidence of a contract of carriage of goods by sea ...*”
- **Hague-Visby**
 - Contract of Carriage applies only to contracts of carriage covered by a bill of lading or other similar document of title.”
- **Hamburg**
 - Bill of Lading means “*a document which evidences a contract of carriage by sea and the taking or loading of the goods by the carrier, and by which the carrier undertakes to deliver the goods against surrender of the document.*”
- **Rotterdam**
 - Contract of Carriage means “*a contract in which a carrier, against payment of freight, undertakes to carry goods from one place to another.*”

Searching for Solutions

- **Block Chain before Supply Chain**
 - K+N Verified Gross Mass Portal
- **Supply Chain / Proof of Concept**
 - IBM / Mahindra Group
 - Maersk / KSI – Guardtime
 - Evergreen / Bolero Int'l
 - ZIM / WAVE



Live Load Testing



Live Load Testing



A Brave New World?



Hurdles to Implementation

- **Liability**
- **Comity**
- **Local Custom**
- **History / Tradition**



Parting Thoughts





Questions?

