



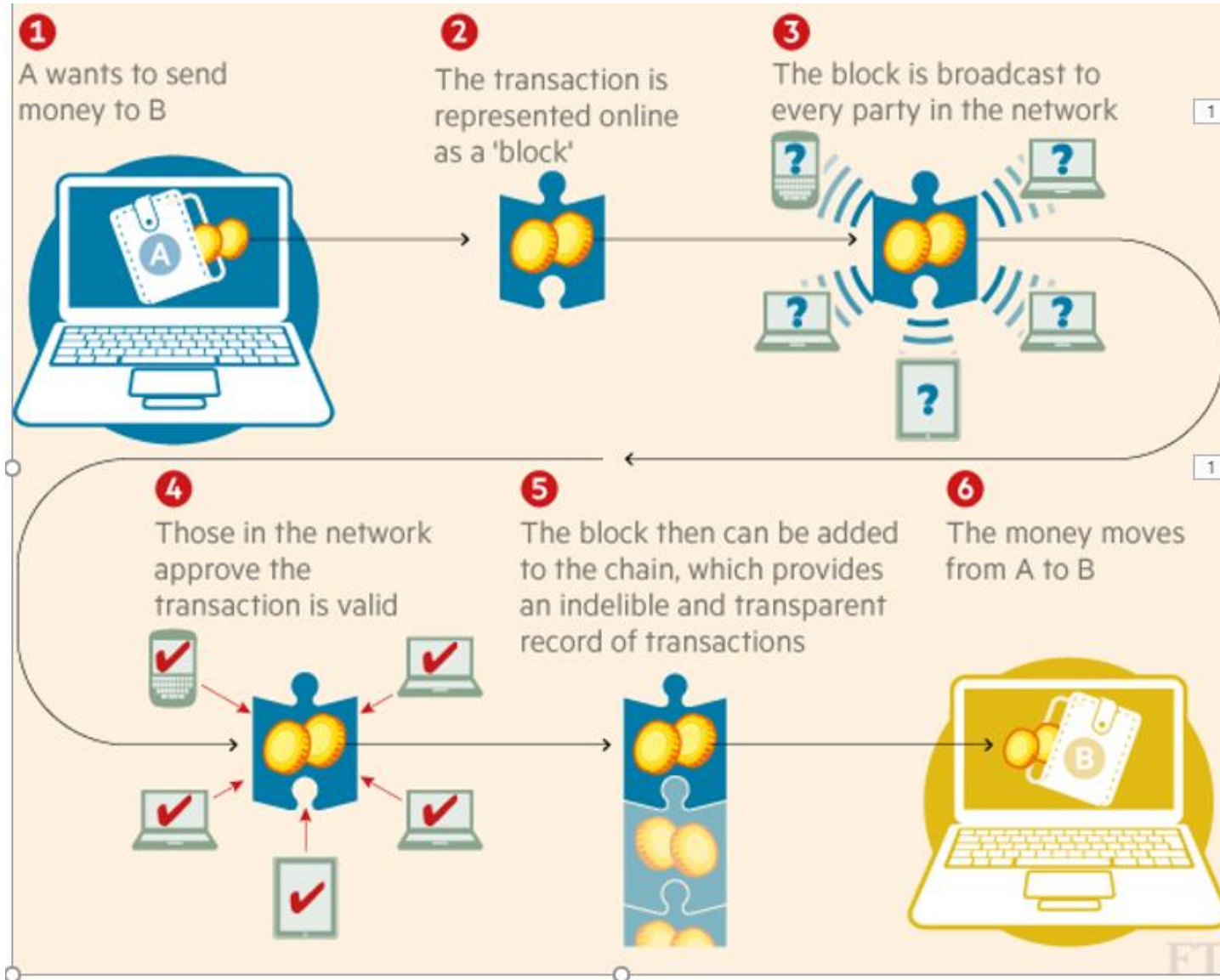
# CONTAINER CHAIN SUPPLY CHAIN BLOCKCHAIN



**PORT**   
TECHNOLOGY

**SMART PORTS & SUPPLY  
CHAIN TECHNOLOGIES**

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ROTTERDAM, THE NETHERLANDS



# How Blockchain works

# Different ways to handle trust

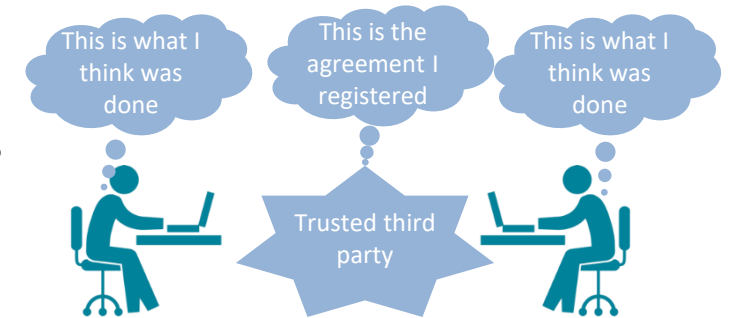
## Today: Individual ledger - Each party holds their own ledger

- You trust known parties and transactions are stored in individually controlled ledger
- In case of dispute there is no independent middleman that can document the transactions, it depends on the records in each parties ledger



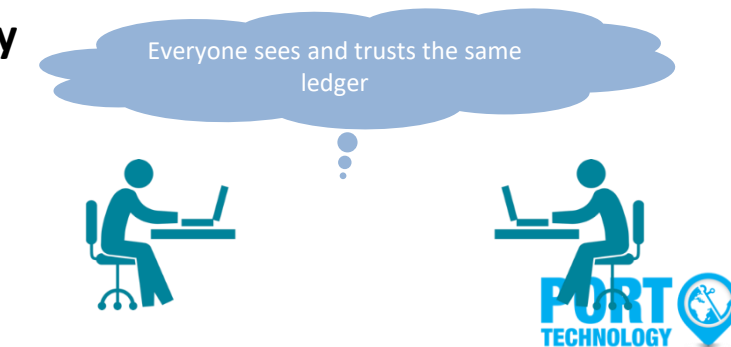
## Today: Centralised Ledger - A middleman trusted by both parties bridge trust between parties unknown to each other

- Each transaction is stored in each parties individual controlled ledger as well as with the middleman
- In case of dispute the independent middleman can document the transactions
- The middleman controls the value chain







## Blockchain: Distributed ledger - Independent blockchain nodes verifies legitimacy of transaction and stores the transaction in a shared immutable ledger

- What I see is what you see - Remove duplication, inconsistency and the need for reconciliation of records
- No central entity controls the value chain



# Business Ecosystem Optimization

	Transaction/Agreement (Container rental, container repair) 	Event (Cargo operations commenced, Arrival Vessel Berth, Ready to Sail) 
 Decentralized Many to Many	<p>Ecosystem controls trust, validation, interaction Single version of the truth throughout the ecosystem</p> <p>Consensus based blockchain technology</p> <p>Examples: Bitcoin, Blockshipping, CargoX, Tradelens paper signature</p>	<p>Ecosystem controls distributed and shared data lake Single version of the truth throughout the ecosystem</p> <p>Distributed data storage / ledger</p> <p>Examples: IoT, Decentralized PortCDM</p>
 Centralized: Many to Many	<p>Centralized entity controls trust, validation, integrations Single version of the truth controlled by single entity</p> <p>Conventional centralized technology</p> <p>Examples: AirBnB, Amazon, INTTRA</p>	<p>Centralized data lake controlled by single entity Single version of the truth controlled by single entity</p> <p>Conventional centralized technology</p> <p>Examples: AIS Marinetraffic, PortCDM, Portbase, Tradelens</p>





# Henrik Hvid Jensen

- Henrik has a Master in Computer Science and a Bachelor in International Economics, he has been working with Technologies for more than 30 years. He started as Head of Research and Innovation with Maersk Line IT in 2011 and have since had different digital innovation roles.
- Today he is strategic advisor at Trustworks
- Henrik Hvid Jensen is the innovator and designer of Maersk/IBM Blockchain initiative to digitalize global trade.
- He has advised Blockshipping on their ICO as well as the design of their platform for building a blockchain based central container registry and a container handling service framework based on software agents running autonomously on the blockchain.
- Previously he designed the platform for one of the globally most promising public digitalization effort the process of registration rights to properties in Denmark.
- All three platforms are based on the visions and digital trends described in his book, that he has also taught at Copenhagen University and IT-University as external associate professor.