



The International Maritime Transport and logistics Conference
Towards Global Competitiveness in Maritime Industry



“INVESTING IN PORTS”
The Trends, The Future



BLOCKCHAIN POTENTIAL FOR LOGISTICS AND MARITIME TRANSPORT

Dr. Maha Diwan
Industry Value Advisor Expert, SAP
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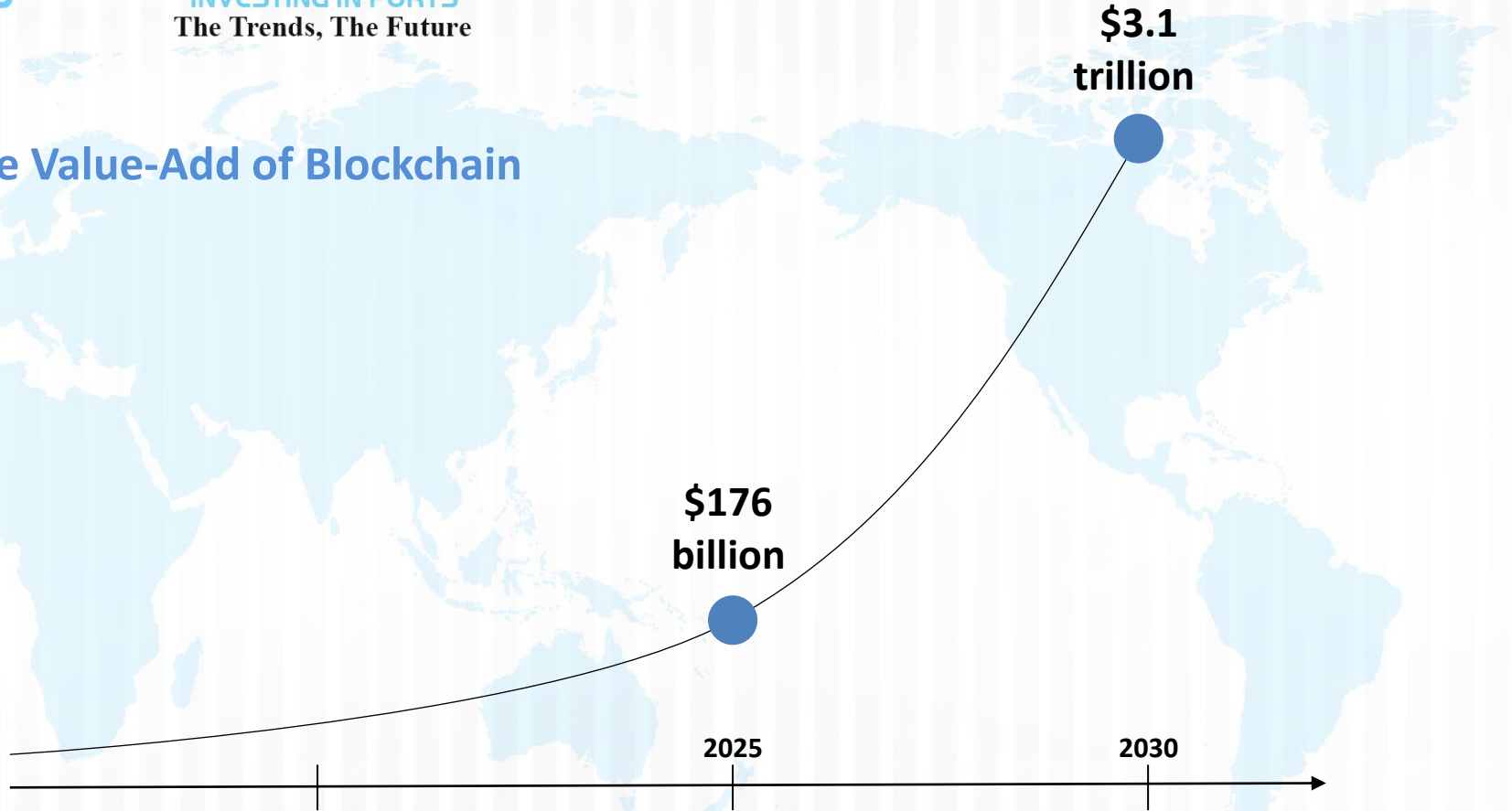


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**“Once a new technology rolls over you, if you're
not part of the steamroller, you're part of the road”**

Stewart Brand

The Value-Add of Blockchain



Blockchain in Numbers

83%

of life science leaders believe Blockchain will be adopted within 5 years¹

>50%

of companies in consumer products, life science, healthcare, tech and media already deploying Blockchain solutions⁴

Over **\$1,4bln**

investments over the past 3 years⁴



2500+

patents filed over last 3 years⁴

24+

countries currently investing in Blockchain⁴

71%

of business leaders using Blockchain believe it plays a key role in advancing the technology and reestablishing industry standards²

90+

central banks engaged in DLT discussions worldwide⁴

Market cap of public Blockchain assets breaks

\$100bln³

1. [Finds Survey from The Pistoia Alliance](#) , 20.09.2017
2. [Blockchain Technology: use cases, statistics, benefits](#) , 20.09.2017
3. [Coindesk. State of Blockchain Q2 2017](#) , 20.09.2017
4. [Deloitte. The future is here](#) , 20.09.2017

Current Challenges in the Maritime Ecosystem



Current Pains in the Ecosystem

- Significant paper documents
- Long chain of parties and intermediaries
- No party has access to the whole supply chain
- No accountability for inefficiency and fraud
- General lack of trust in the system

But What is Blockchain?

Composition of Existing Technologies

Decentralized peer-to-peer technology

Private / Public key cryptography + hashing algorithms

Consensus algorithm

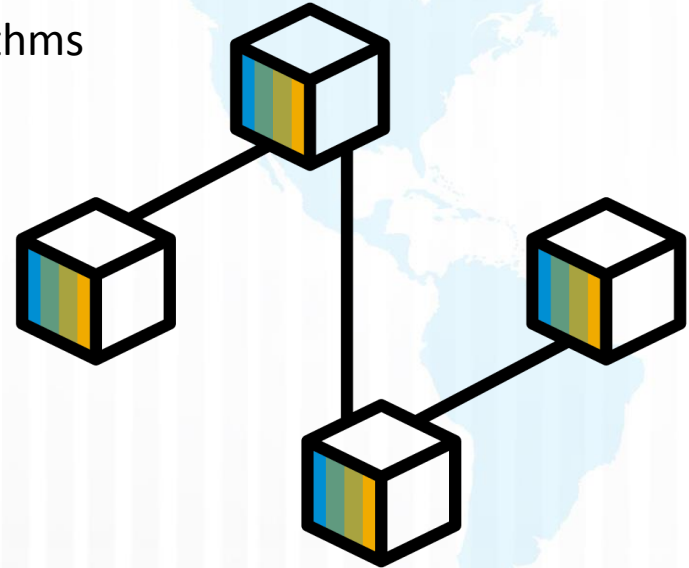
Shared Information Storage

Distributed

Transparent

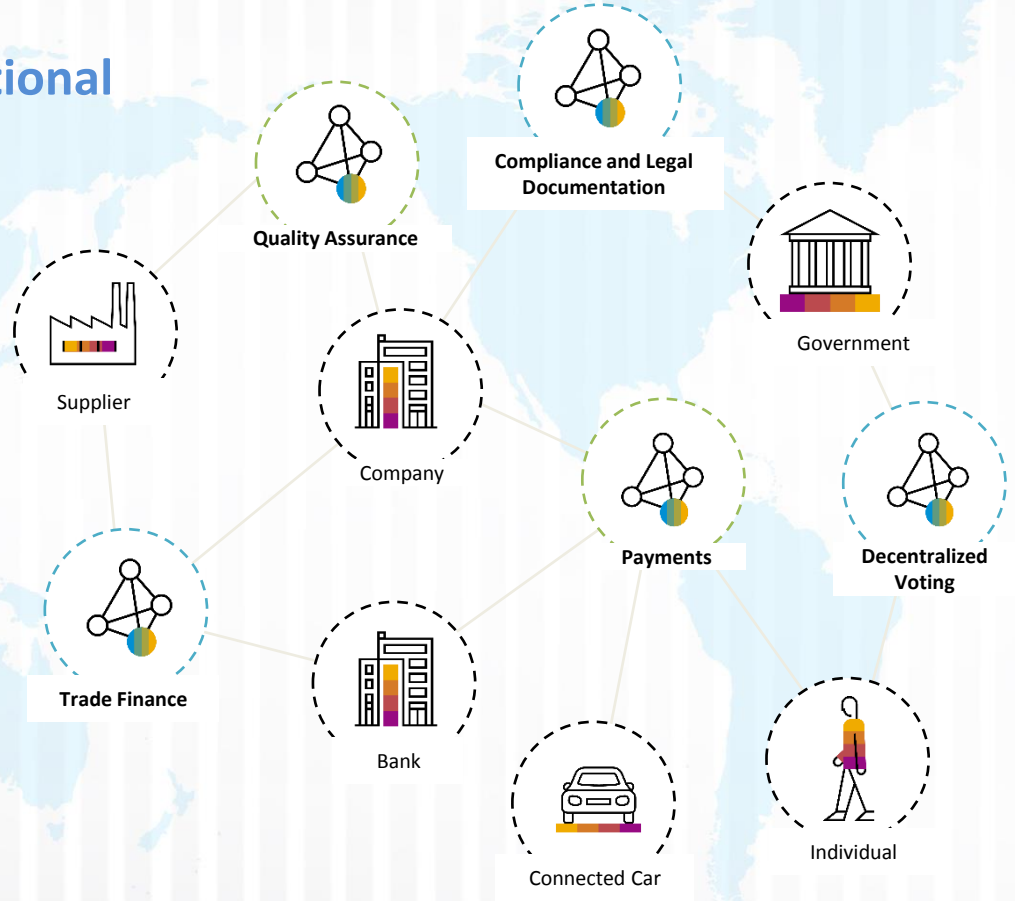
Immutable

Cryptographically Linked Blocks



Blockchain can Transform Transactional Networks

Blockchain is a new protocol for **distributed ledgers** in multi-party business processes.



The Value Drivers of Blockchain

Process Optimization



Multi-party collaboration on single version of truth

Time & Cost Reduction



Peer-to-peer network without intermediaries

Transparency & Auditability



Undeniable history due to immutability of records

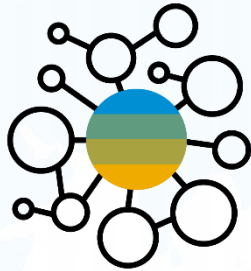
Risk & Fraud Minimization



Provability & automated business rules (smart contracts)

Blockchain deployment options

Public

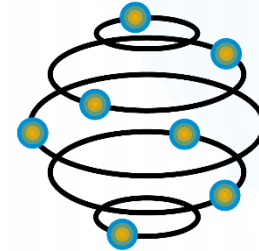


Permissionless Blockchain

Open for everyone to participate and read/write.



Consortium



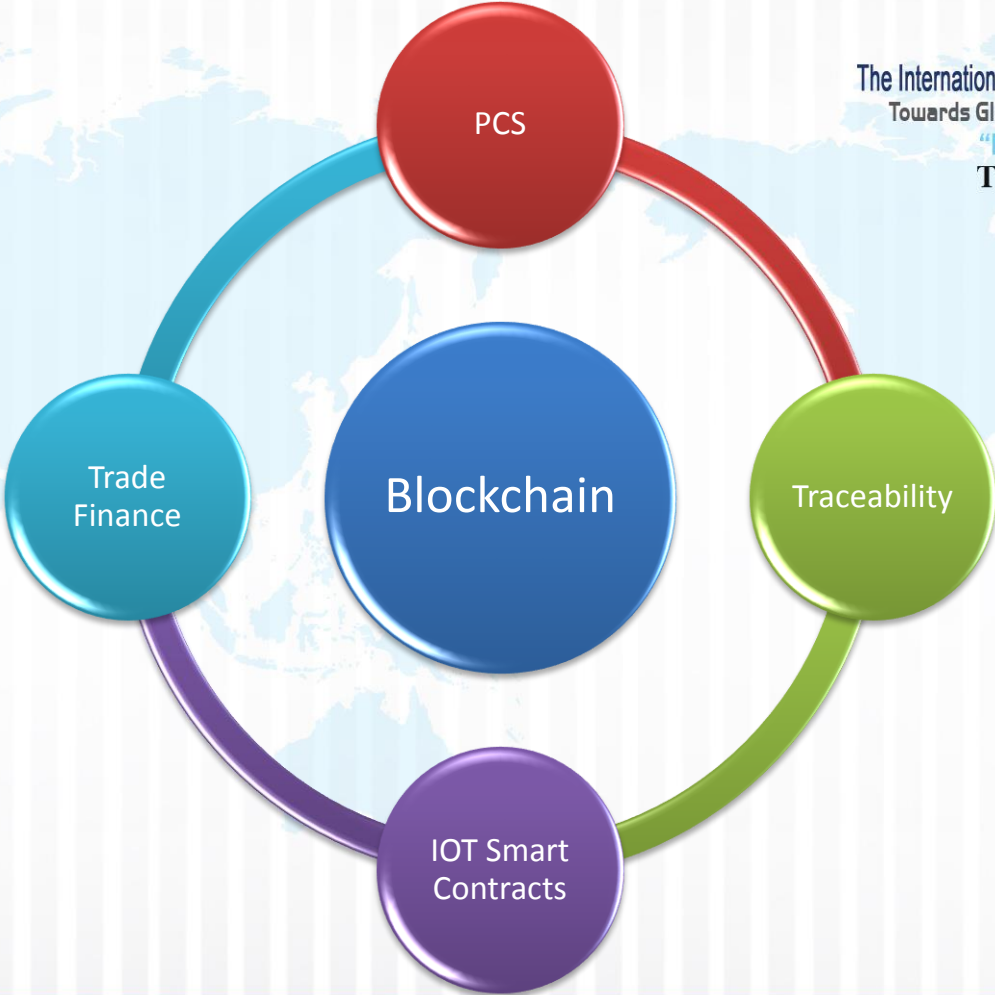
Permissioned Blockchain

Access and permissions controlled by pre-selected set of nodes

Blockchain Use Cases in the Maritime Industry

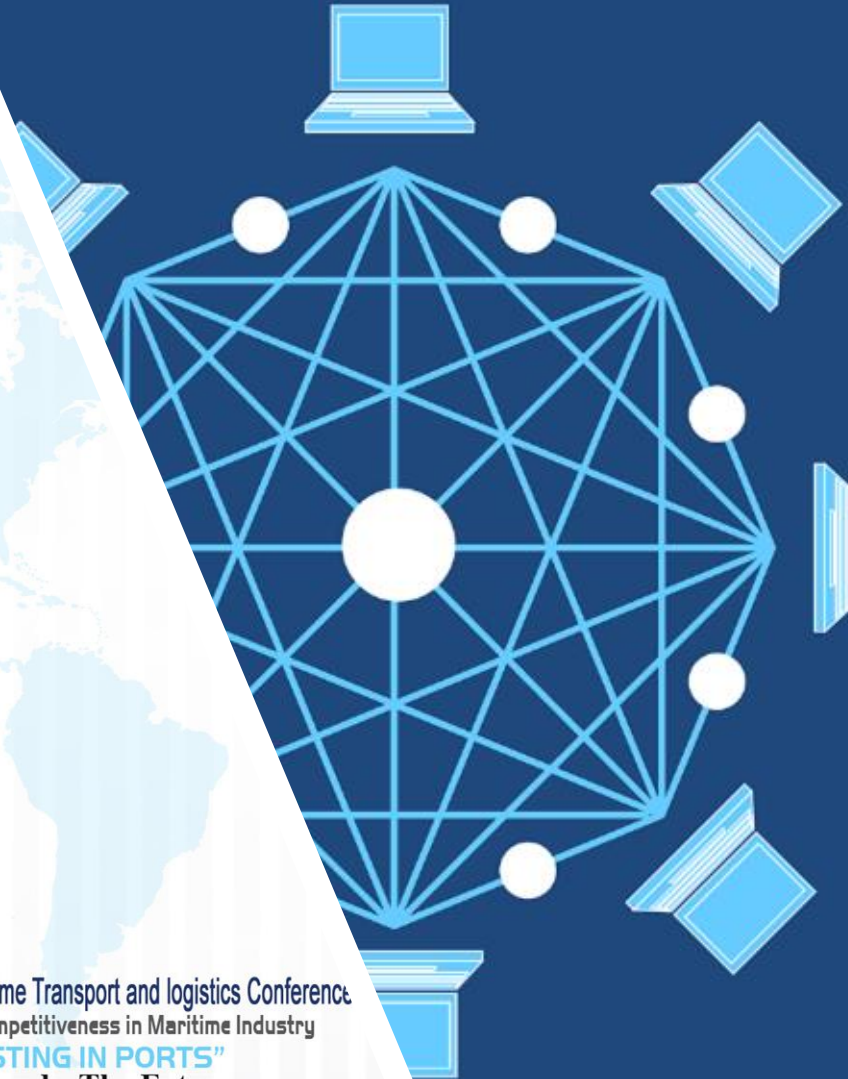


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Port Community Systems PCS

- Significant exchange of information (most are paper-based)
- Many parties involved in data exchange (separate silos)
- Blockchain acts as the **new PCS** where multi-parties can contribute based on their permissions and roles in the chain
- Blockchain creates a basis of **trust and security**
- Minimizes bottlenecks, inconsistent data and fraudulent activities



Process Traceability

- Immutable ledger to store **processes** and **timestamps**
- Process steps are stored in an immutable and **chronological** order
- **Realtime view** of the whole process
- Blockchain creates a basis of trust and security
- Minimizes **bottlenecks** thus reducing costs



IOT and Smart Contracts Automation

- Advanced IOT usage in the logistics and transportation industry
- Smart contracts are electronic rules that are applied once certain conditions are validated
- **New business models** are emerging
- Many **use cases** in port logistics (asset and infrastructure monitoring, capacity optimization, cargo monitoring, warehouse control,...)
- **No centralized intermediaries** are required



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Trade Finance

- Guarding against fraud and saving reconciliation costs
- Banks can be included in the blockchain network
- Smoother operations
- Minimizing lengthy validation processes where containers can be held in port waiting for proof of commercial viability



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Forward Looking

- Blockchain is gaining potential in the maritime industry
- However, it is still in its early stages of adoption
- There are still some barriers that we need to consider
- Regulatory systems needs to be revisited
- Trust in technology



*Thank
You*