

The title "Blockchain Lunch and Learn" is centered in the upper half of the slide. It is written in a large, bold, black sans-serif font. The background of the slide is a composite image featuring a white airplane flying in a blue sky with clouds, a white truck on a road, and a large stack of colorful shipping containers. In the top left corner, there is a blue square icon with a white grid pattern.

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## Supply chains have three core modern era challenges ...



**Data Visibility**



**Process Optimization**



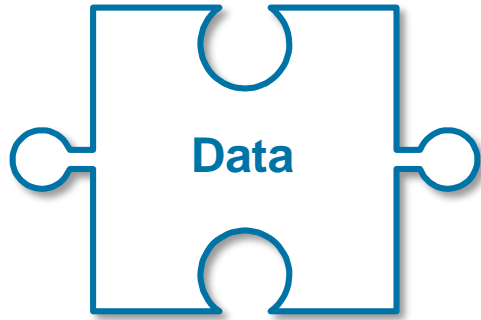
**Demand Management**

... and despite progress in all three areas, end-to-end inefficiencies remain

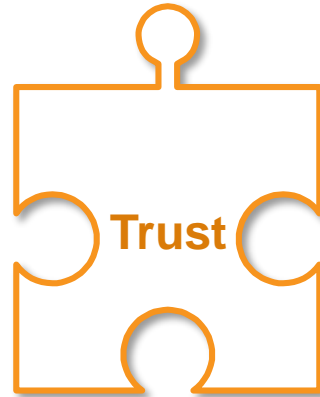
- Administrative costs are twice the cost of physically shipping the container
- Fraud in global trade is \$600B
- Worldwide cargo losses exceeds \$55B
- Non-tariff trade barriers suppress global trade by ~15% (World Economic Forum)

# Blockchain creates the TRUST necessary to address these challenges

We can connect the ever-increasing sets of data...



- 80% of worldwide data is sitting in silos
- 90% of data in the world today has been created in the last two years
- Less than 0.5% of all data is ever analyzed



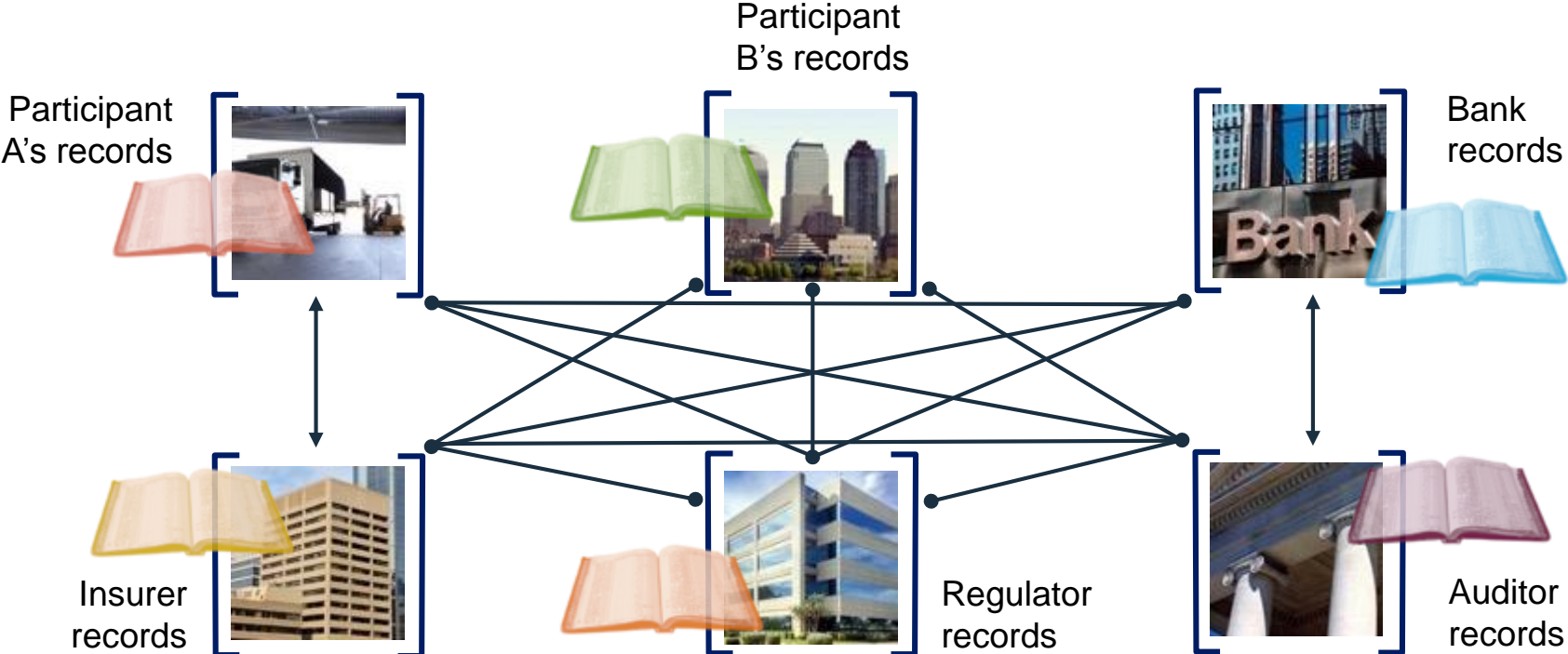
**BLOCKCHAIN**

... with the ever-more-powerful analytics



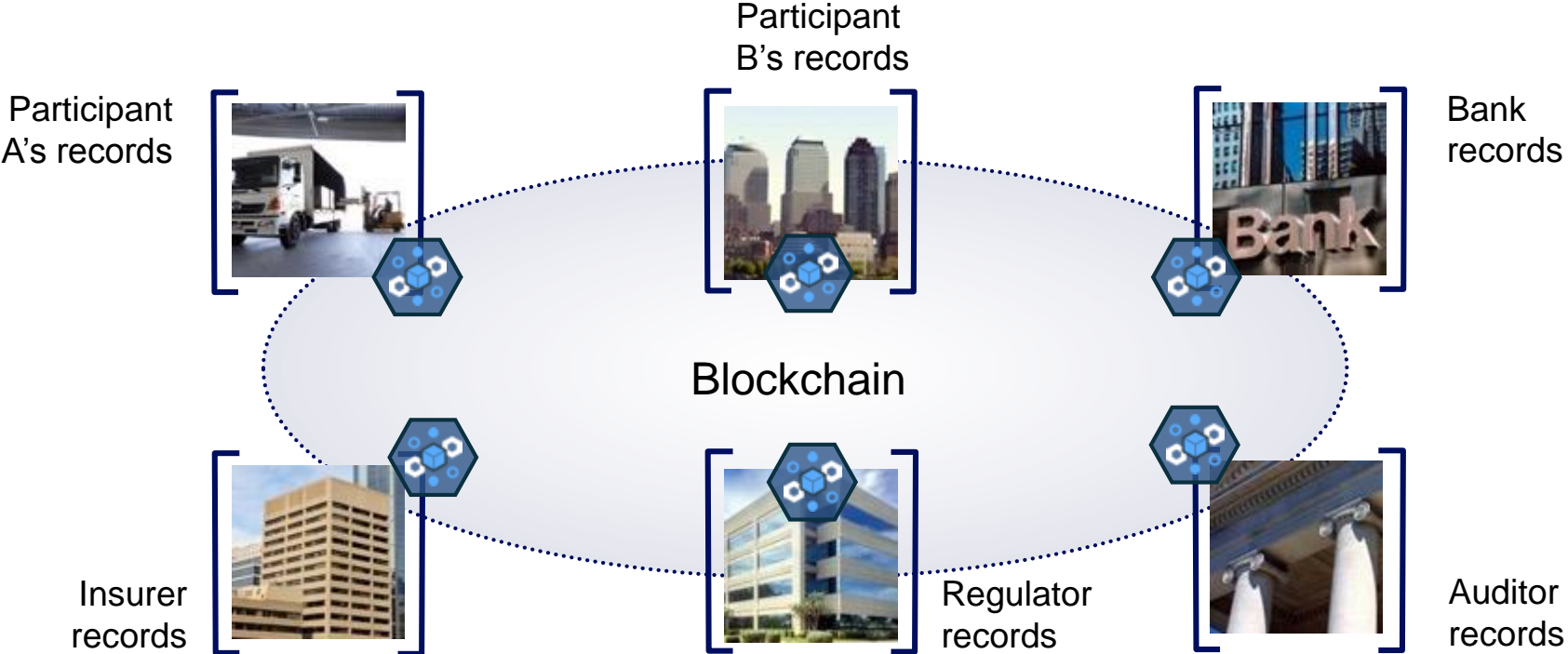
- \$130B+ is spent on big data and business analytics globally
- 73% of global CEOs report cognitive computing will play important role in the future of their organizations

# Problem...



... inefficient, expensive, vulnerable

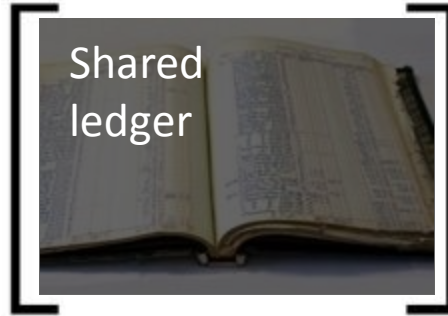
# Solution: a shared, replicated, permissioned ledger ...



... with consensus, provenance, immutability and finality

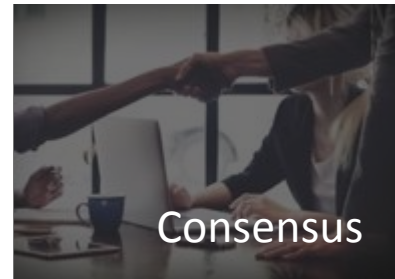
# Blockchain for Business...

Append-only distributed system of record shared across business network



Shipping documentation is embedded in transaction database and executed with transactions

Ensuring appropriate visibility; transactions are secure, authenticated and verifiable

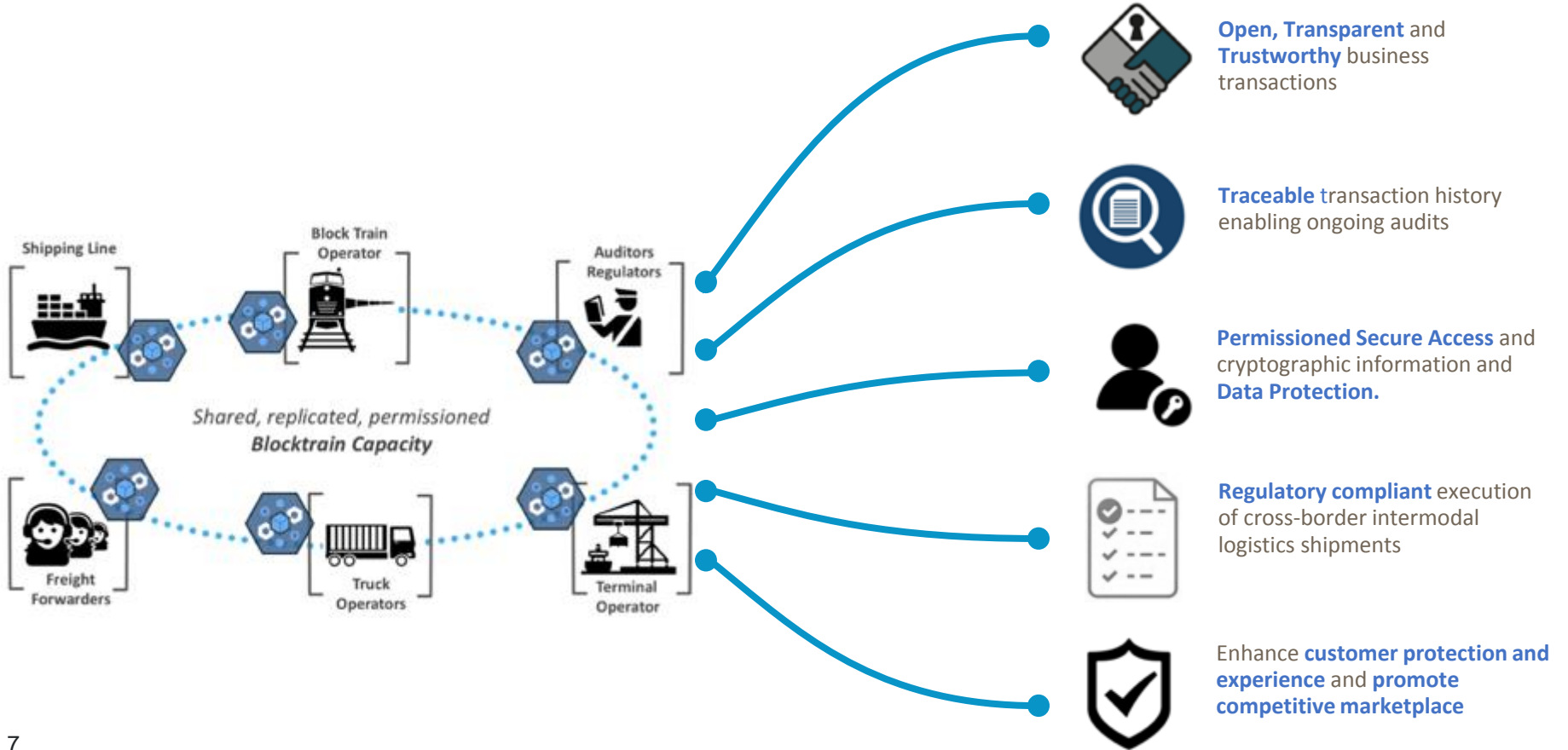


Transactions are endorsed by relevant participants

... Broader participation, lower cost, increased efficiency

# TRUST in Trade and Supply Chains:

## Shared Ledger, Smart Contracts, Privacy and Consensus



# Industry Supply Chain Use Cases

## Supply Chain Workflow



Blockchain solution to manage and track the paper trail of tens of millions of shipping containers across the world by digitizing the supply chain process

## Supply Chain Visibility



Blockchain technology provides visibility to all the participants involved in moving goods by tracking the purchase order and shipment status

## Supply Chain Accountability



Blockchain holds the history of many items through entire supply chain providing traceability of raw materials

## Manufacturing Provenance



Blockchain holds complete provenance details of each component part, accessible by each manufacturer in the production process

## Supply Chain Financing



Blockchain solution creates a consolidated and detailed view of transactions visible to all parties resulting in a reduction in # disputes, dispute cycle time, and improvement in use of working capital

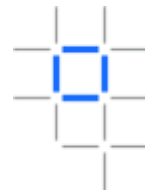
## Regulatory and Insurance



Blockchain captures information about shipments, risk and liability, and helps firms comply with insurance regulations



# Key players for blockchain adoption



## Market Maker

- More generally, the organization who **innovates**
- Creates a **new business process or model**



## Industry Group

- **Seed and fund the business network** and set the **industry standards**
- Drive **industry adoption** and scale the network



## Regulator

- Define/adopt **standards**
- **Mandate adoption**

# Blockchain and Trade Facilitation

Characteristics that support trade facilitation measures

- Simplified business processes and workflows across organizations
- Immutable audit trails
- Resilient by nature, Secure by design
- Enhanced compliance due to visibility

However barriers remain that will take time

- Regulatory and legal acceptance
- Interoperability and scalability of early stage technology