BLOCKCHAIN IN ACTION

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OBJECTIVES AND AGENDA

Present an introduction to the disruptive technology, discuss emerging use cases and showcase real-world examples of blockchain in action

1. What is Blockchain?
2. Emerging Use Cases
3. Blockchain in Action
WHAT IS BLOCKCHAIN?
WE ESTIMATE >30% OF A BUSINESS COST BASE IS LOCKED UP IN DATA MESSAGING & QUALITY ISSUES

Source: https://www.visionetsystems.com/blog/tear-down-those-silos/
TODAY: MESSAGE BASED BUSINESS MODEL

“Can you send me what I need?”
“Here’s what I know, what do you know?”
“Did you receive it?”
“Is it right?”

Traditional Data Systems
CHALLENGES WITH TRADITIONAL DATA SYSTEMS

- **REDUNDANCY**: Many copies of data maintained by many participants; constant reconciliation
- **COPY & PASTE**: We don’t know where data came from or how it may have been changed
- **CONTROL**: Blunt control mechanisms; database, table, and row access control
- **SECURITY**: Perimeter based security models regularly breached
TOMORROW: BLOCKCHAIN BASED BUSINESS MODELS

TRUST

‘I see what you see’
FOUR KEY FEATURES CREATE THE CONFIDENCE

PROVENANCE
We know where it came from and can trace its’ complete history

TAMPER EVIDENCE
We know if someone has tried to change it

CONTROL
We can control what someone can see and do at a data element level

SECURITY
We can encrypt and segregate data at a data element level
EMERGING USE CASES
Use cases are emerging across a number of areas and industries with active experimenting to transform processes across ecosystems and entire industries.
WHAT MAKES A VALID BLOCKCHAIN USE CASE?

1. Are multiple parties involved?
   Yes
2. Is there value in sharing data?
   Yes
3. Is there mistrust between the parties?
   Yes
4. Will the parties be able to agree to rules for sharing access?
   Yes

Consider Blockchain

Consider Traditional Technology

Multiple parties in the ecosystem
Value in shared access to data
Agreement on business rules, governance, standards, etc.
Value in data provenance / audit trail
THREE BLOCKCHAIN DEPLOYMENT PATTERNS

- CENTRAL INFRASTRUCTURE LEADER
- CONSORTIUM OF PEERS
- PLATFORM INSTALL BASE CONVERTED TO NETWORK

UX Logic
UX Logic
UX Logic

Data
BLOCKCHAIN IN ACTION
OVERVIEW

An international shipment of goods for companies in areas such as the automotive, retail or consumer goods industries typically requires more than 20 different documents, many of which are often paper-based, to enable the goods to move from exporter to importer. Across these documents, up to 70% of the data can be replicated. The result is compromised data quality and lack of real-time visibility to all parties involved in the trade and potential delays in the financial settlement on goods.

A consortium comprising AB InBev, Accenture, APL, Kuehne + Nagel and a European customs organization successfully tested a blockchain solution that can eliminate paper-based shipping documents and save the freight and logistics industry hundreds of millions of dollars annually.

The consortium tested Accenture’s solution on 12 real-world shipments, all of which were sent to a different jurisdiction that each carried its own particular regulatory requirements. The results confirmed that blockchain can reduce operating costs and increase supply chain visibility.

Accenture provided the technological and consulting expertise on the blockchain technology and developed the technical architecture required to support a blockchain solution, leveraging the capabilities of its Singapore Internet of Things practice to rapidly build the prototype.

The solution can:
• speed up the entire flow of transport documents,
• reduce the requirement for data entry by up to 80%,
• simplify data amendments across the shipping process,
• streamline the checks required for cargo,
• reduce the burden and risk of penalties for customs compliance levied on customers.

EXECUTIVE SUMMARY

AB InBev, Accenture, APL and Kuehne + Nagel demonstrated how blockchain will create huge efficiencies for the industry

AB INBEV | APL | KUEHNE + NAGEL

INDUSTRIES
LOGISTICS, SHIPPING

APPLICATION
TRACEABILITY

TECHNOLOGY
HYPERLEDGER FABRIC

STAGE
PROTOTYPE

COUNTRY
BELGIUM, SINGAPORE, SWITZERLAND

External Sources
Accenture Press Release

Accenture Contacts
Adriana Diener
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**BLOCKCHAIN USE CASE**

**Freight Bill Audit and Pay**

**DATA APPENDED ONTO THE BLOCKCHAIN**

1. **Shipper** approves RATE CONTRACT.
2. **Carrier** approves RATE CONTRACT.
3. **Freight Order** created.
4. **carrier** approves FREIGHT ORDER.
5. **Tracking Log** created with time stamp & geolocation events.
6. **Invoice** created through smart contracts.
7. **Payment** accepted.

* = Consensus Node

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**BLOCKCHAIN USE CASE**

**Well Site Logistics**

**BLOCKCHAIN ENABLED PROCESS**

- **Store rates** and match them to the correct invoices
- **Real-time track and trace** of movements of carrier and goods
- **GPS verification** for posting and receiving goods
- Confirmation at every step acts as digital auditor
- **Invoices** and payments are automated with fewer discrepancies

**BENEFITS**

**Reduced Invoice Processing Costs**
- Third Party Management Fees
- Third Party Reprocessing Fees

**Accurate and Timely Invoicing**
- Accurate Freight Rates
- Accurate Accessorial Charges
- Duplicate Payments Eliminated
- Late Fees and Interest Charges Eliminated
- Tolerance Overpayments Eliminated

**Accurate and Timely Payments**
- Freight and Sand Cost Reduction

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**Well Site MM**

**Carrier**

- Assign truck and send for loadout
- Arrive at sand mine/terminal
- Leave with loadout
- Arrive at well site
- Unload Sand
- Goods Receipt

**Sand Logistics**

- Load Sand, Create BOL, Weigh
- Record BOL/Ticket # and Weight

**Sand Provider**

- Sand is needed

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**3 – 5% Cost Savings**

- Fewer discrepancies to reconcile
- Electronic verification
- GPS Validation
- No more manual auditing
- Reduce unknown idle time and disruptions
- Easier to do business with

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**Blockchain Activity**

**Non-Blockchain Activity**

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**GPS Tracking**

**Mobile Application**

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**Reduced Invoice Processing Costs**

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**Accurate and Timely Invoicing**

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**Accurate and Timely Payments**

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**Reduced Invoice Processing Costs**

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**Accurate and Timely Invoicing**

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**Accurate and Timely Payments**

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Today, approximately one-sixth of the world’s population lives without an officially recognized identity. ID2020 is a public-private consortium promoting the UN 2030 Sustainable Development Goal of providing a unique digital legal identity for everyone on the planet through a technology-forward approach that will leverage secure and well-established systems.

Accenture, in partnership with Microsoft and Avanade, developed an identity prototype based on Technology and unveiled it on June 19, 2017 at the UN headquarters in New York during the second summit of ID2020.

The project aims to help individuals such as refugees prove who they are in order to gain access to basic services such as education and healthcare.

The new platform will connect existing record-keeping systems of commercial and public entities through blockchain, allowing users to access their personal information wherever they are, and to present their IDs via an app on their smartphones when required.
FINAL THOUGHTS

Have a Point of View

A strategic point of view needs to be informed by what blockchain can do

Be Value Led

Don’t get caught up in the hype, the jargon, the marketing.

Prioritize Investments

Prioritize investment decisions alongside other important needs.

Not just a Technology Topic

Selecting the right partners in your ecosystem is key to success; it is a team sport!