GSMA Intelligence

BLOCKCHAIN IN SUPPLY CHAIN CONFERENCE

Blockchains & Supply Chains: the perfect match

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GSMA Intelligence

Agenda

- Why Blockchain in real world applications
- Why Blockchain in supply chains
- What's happening in the market
- Use cases: food quality, number portability, land registry
- Conclusions
- Open questions

Blockchain in real world applications

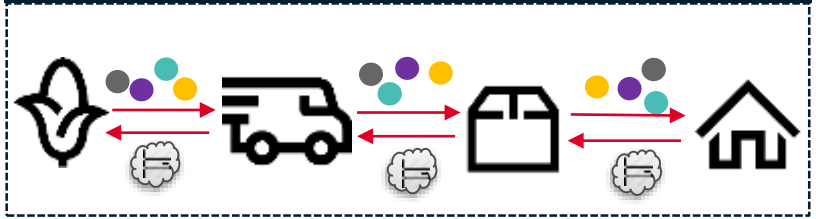
3 Key Benefits of Blockchains	How different our daily lives can be
Fast execution of transactions	• **Digitally secure, less cyberattacks and fraud** Easy to verify integrity of data and reliability of assets.
Automated trust in the application	• **Control of personal data (finally)** Individuals control who uses their data and can selectively allow for it in exchange of a monetary benefit • **O fees for transactions** Instant exchange of goods and services, with 0 fees
Track assets status in real time and historically	• **No need for ‘Ubers’ and ‘Airbnbs’** Users of sharing economy platforms transact directly with drivers without needing to go through the ‘Ubers’ • **Incentivisation and rewards** Citizens are rewarded from their cities authorities for recycling

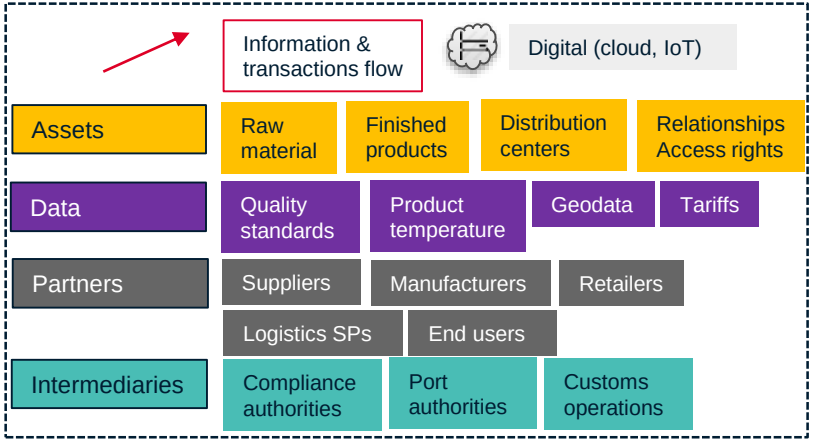
Blockchain in real world applications

what matters

3 Key Benefits of Blockchains	The promise of Blockchain for the Supply Chain
Fast execution of transactions	Elimination of intermediaries through consensus Peer to peer exchange of info, goods and services
Automated trust in the application	A “single view of the truth” in the supply chain Dispute resolution thanks to immutability
Track assets status in real time and historically	Traceability of assets and transactions Cryptographic validation of documentation

Supply chain is the perfect fit for Blockchain





What's happening in the market?

What matters

- **Implementations typically through BaaS.**

All usual suspects are involved…

- **Specialised companies expand scope of applications.**

Most prominent ones in identity management and asset tracking.

- **Tackling counterfeiting and fraud in the commerce gain traction.**

Emerging as the highest value add applications.

- **Blockchain in the supply chain has cross-sector applicability.**

From transport and shipping to media, telecoms and public policy.

Notable Vendors & Adopters

Blockchain-as-a-Service (BaaS) horizontal platforms

Microsoft, IBM, Alibaba Group, CISCO, amazon web services, ORACLE, Baidu 百度

Logistics, transport and shipping companies

MAERSK, 京东物流 JD Logistics, ups, FedEx, DHL

Food & Pharma

Walmart, P&G, Nestlé, Pfizer, MEDICALCHAIN, FarmaTrust

Assets tracking & identity experts

guardtime, Ruddle & Cook, CHRONICLED, evernym, SLOCK.IT

Telecoms

Telefónica, kt, T-Mobile, swisscom, SoftBank, TURKCELL

Why Blockchain in supply chains: Walmart is tracking mangos

Food quality use case

Photo by Emma Van Sant, Unsplash

Objective	• Walmart was facing criticism and allegations over food contamination scandals • Needed to improve food quality and ensure compliance in the supply chain • Blockchain was implemented for the mango line
Data put on the Blockchain	• Products and orders details • Quality assessment results • Product temperature and other qualities while in production and in transit • Digital certifications
Outcome	• Unit tracking was brought down to 2.2'' from 1 week • Impoved transparency and visibility on the chain

Why Blockchain in supply chains: Italtel on number portability

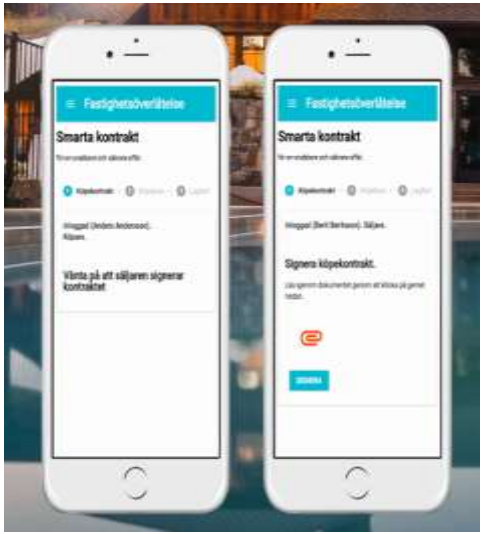
Blockchain for telecoms use case

Objective	• Switching operators and still keeping the same phone number is typically slow process in Italy • Operators have to update databases • Consumers get poor service and cannot benefit from competitive offerings
Data put on the Blockchain	• Users' phone number, identity and credit info • Operators' network and customer relationship info
Outcome	• From a matter of days, the process is down to 3" • Quick ROI, expected to break even within a year • Better services for consumers thanks to increased competition in the countries telcos market • Plans to make it to a European-wide solution

Photo by: Daniel Mayer, Wikipedia

Why Blockchain in supply chains: Land registry in Sweden with Telia

Blockchain for public policy use case



What a blockchain-powered real estate transaction might look like

Photo by: Lantmäteriet

Objective	• Swedish land registry authority wanted all its data and services to be available digitally and paperlessly. • Telia worked with the Swedish Land Registry authority to create an open platform for digital land and property registration, purchases and mortgages.
Data put on the Blockchain	• 3.2 million property units and owners • Geodata, addresses, coordinates • Registered mortgages
Outcome	• The platform is used by buyers, sellers, banks, public authorities, all of whom seamlessly transact through it • The platform is based on the open data concept so the public benefits from its use

Conclusions: The opportunity is clear, yet the commercial activity is still limited

Blockchain augments the digital supply chain.

Cloud, IoT, analytics and digital payments are the foundation

Two types of adopters are drawn in Blockchain: the tacticians and the FOMOs.

First, it's about use case discovery and cost savings. Fear of missing out on the potential is pushing people into adoption. FOMOs want to make an impact.

Companies proceed with great caution and concern.

The right mix of on-chain vs. off-chain will continue to be the preferred way forward.

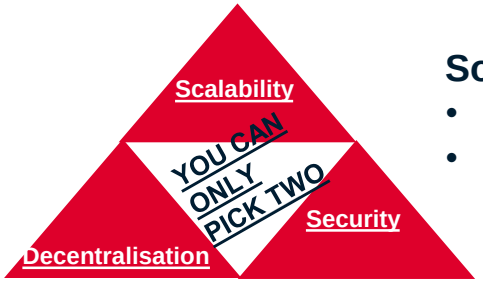
Minimum viable products require minimum viable ecosystems.

Role of alliances is key. Synergies with transport, energy, food and pharma are being explored.

How will adoption grow? Open questions

Who governs Blockchain?

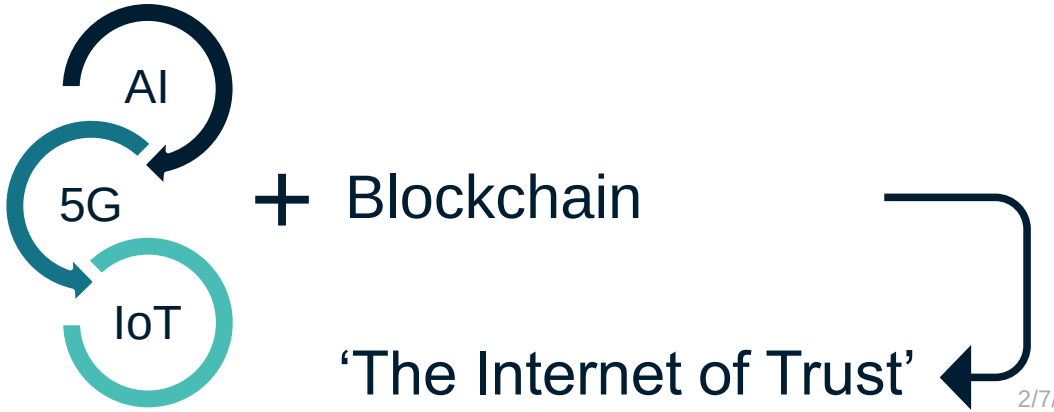
Interoperability of Blockchains is key. End goal is for users to not even realise they are using Blockchain.



Solving the trilemma of decentralisation-scalability-security.

- Developers are doing the weightlifting and they need time
- Build on top of Ethereum, Hyperledger, BigchainDB, VS. build a Blockchain from scratch.

Hype or disruption?



Thank you!

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