



**VALUE OF DISTRIBUTED
LEDGER TECHNOLOGIES**



DISTRIBUTED LEDGER TECHNOLOGY

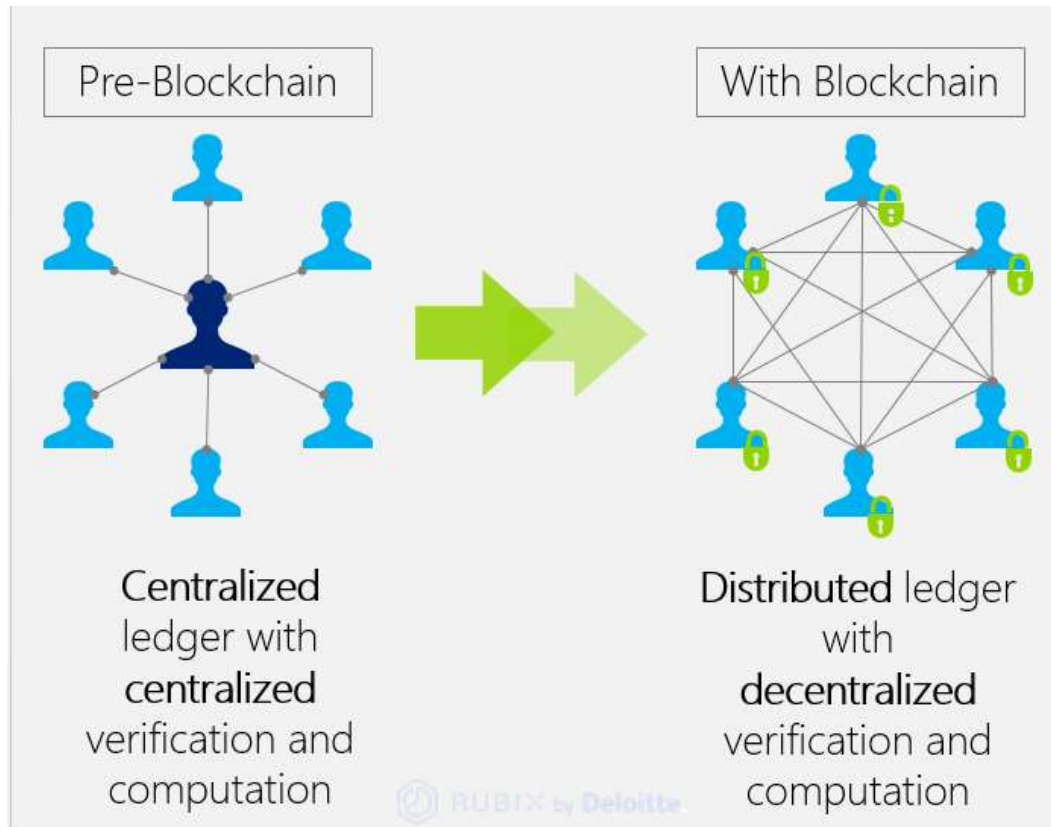
Distributed ledger technology (DLT) is a digital system for recording the transaction of assets in which the transactions and their details are recorded in multiple places at the same time

<https://searchcio.techtarget.com/definition/distributed-ledger>

DISTRIBUTED LEDGER TECHNOLOGY - BENEFITS

1. Censorship resistance - decentralized
2. Trustless transactions – shared ledger data with no trust
3. Verifiable history – immutable and stored forever

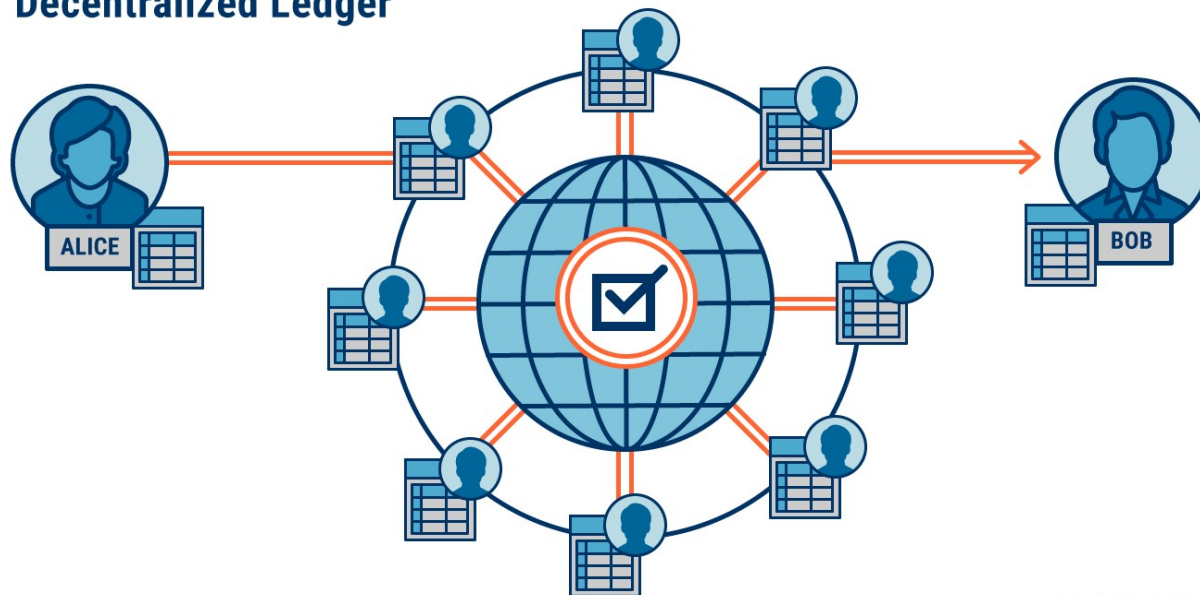
DECENTRALIZATION



https://www.researchgate.net/figure/Centralized-and-decentralized-networks-3_fig1_325681952

SHARED LEDGER

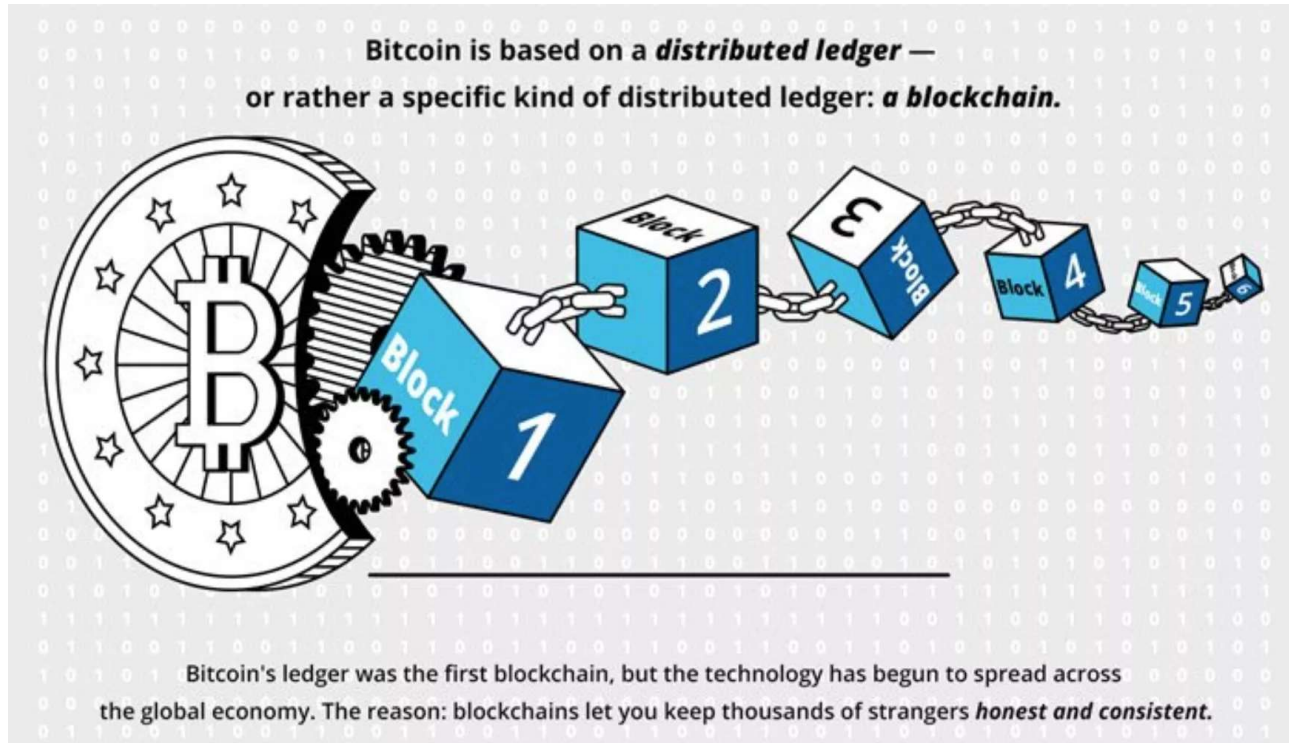
Decentralized Ledger



CBINSIGHTS

<https://www.cbinsights.com/research/what-is-blockchain-technology/>

VERIFIABLE HISTORY



<https://www.investopedia.com/terms/b/blockchain.asp>

PUBLIC LEDGER

- Open to all, Anonymous*
- Mining or (electrically/computationally) expensive compute operations required for validation and hashing (PoW)
- Standard set of protocols as set by chain developers
- Fees applicable for recording transactions/data on the blockchain
- Economic ecosystem – alt currencies
- Useful for wide range of public applications including smart contracts, rule engines etc together with encryption
- Token/ currency interchange

PRIVATE/HYBRID LEDGER

- Private and Permissioned Ledger
- Controlled access to ledger/blockchain
- Expensive mining operations not required
- Consensus, identity protocol needs to be accepted by participating members
- Fees and economic control not required
- Very useful in enterprise applications

PUBLIC LEDGER

OPPORTUNITIES



- Crypto currency economy
- Currency exchange
- Crypto based instruments (hedge funds, ICO, STO etc)
- Fintech – money transfers, insurance & lending



- Asset registry
- Identity registry



- Legal/ Government records –
 - ✦ Land registry
 - ✦ Will/inheritance documents
 - ✦ Voting/ election records
- Legislation and Judiciary



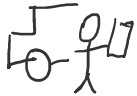
- Utility metering and billing
 - ✦ Electricity generation and consumption – self governed
- Warranties and claims

HINDRANCES & ROADBLOCKS

- Anonymity leads to regulatory objections and workarounds
- Complex technologies and implications – not user friendly enough for layman
- No recourse in a lot of cases
- Multiple false starts, unrealistic hype cycles and expectations
- High level of infrastructure required to actively participate in networks

PRIVATE/HYBRID LEDGER

OPPORTUNITIES



- Retail sales & distribution
- Freshness tracking, returns and refunds
- Location of manufacture and counterfeit tracking



- Logistics & shipping – way bills, legal documents
- Currency interchange and local taxation
- Reconciliation



- Warehousing and storage – bonded warehouses and cross border storage
- Temperature tracking



- IOT device enumeration and tracking



- Place of Origin/ GI registry
- Organic and other produce certifications

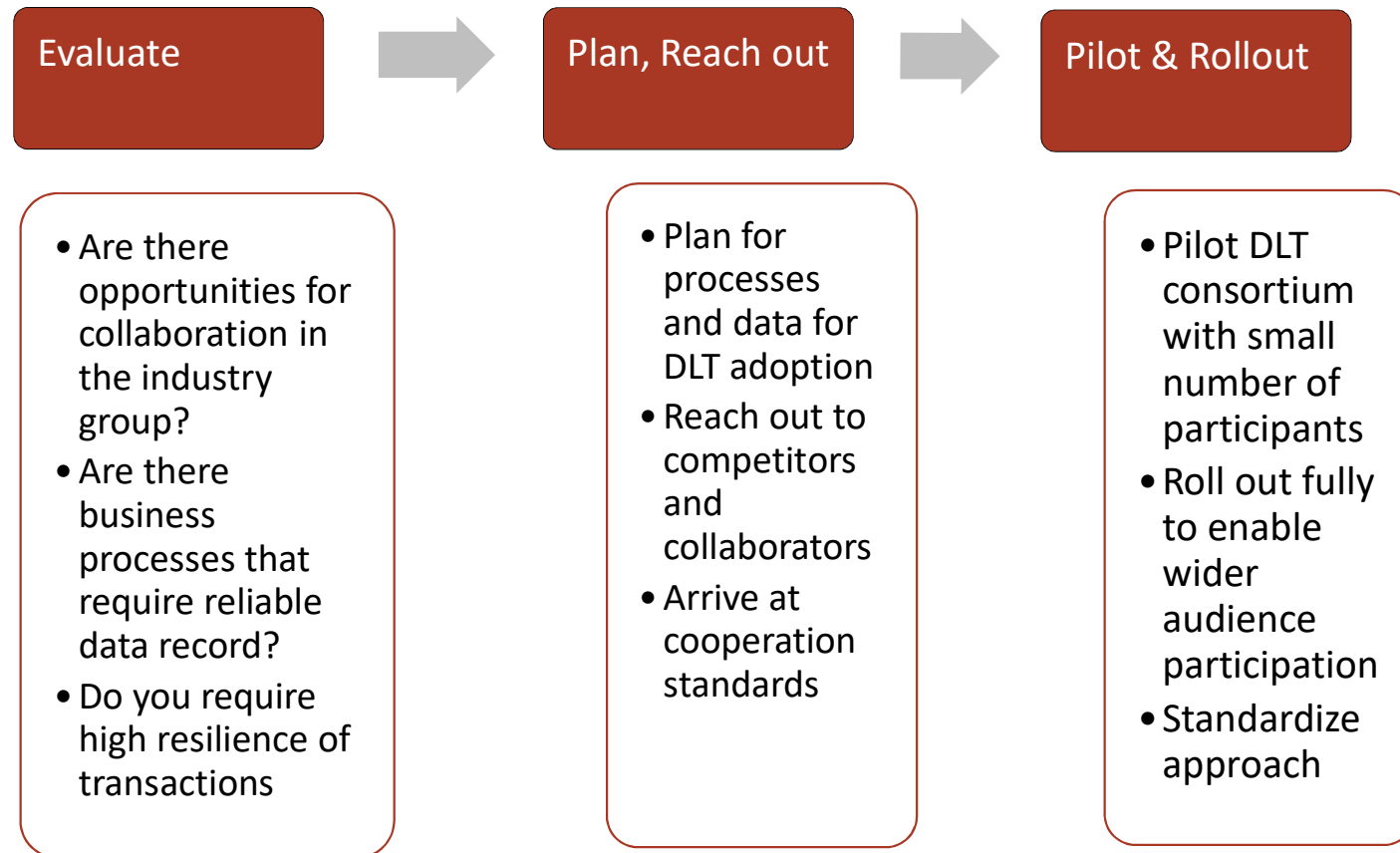
HINDRANCES & ROADBLOCKS

- Blockchain is effective in a cooperative/consortium – creating the consortium of vertical/industry group requires consensus and maturing of relations in the spirit of cooperation/sharing
- Enabling regulatory authority to use consortium ledger data as authority requires convincing and governance changes
- Standardization can/should be effected through industry consortium

DLT LANDSCAPE DEVELOPMENTS

- Newer DLT initiatives and platforms - increase scale, reduce transaction time and compute requirements
- Blockchain phones – Much needed to reduce barrier of entry for layman and quicker integration into mainstream applications
- Regulatory changes – supporting wider adoption of blockchain tech
- Wider mainstream acceptance – post hype cycle

HOW TO GET IN – ENTERPRISE ADOPTION



FOOD FOR THOUGHT?

Was the genome (human or otherwise), one of the oldest organic DLTs in the universe?

A stylized, thick red graphic element resembling a lowercase 'f' or a similar symbol, positioned on the left side of the page. It has a circular base and a vertical stem that curves at the top.

THANK YOU

