WORLD TRADE ORGANIZATION

BLOCKCHAIN AND SME FINANCING

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I. QUICK INTRO TO BLOCKCHAIN

Blockchain ≠ **Bitcoin**

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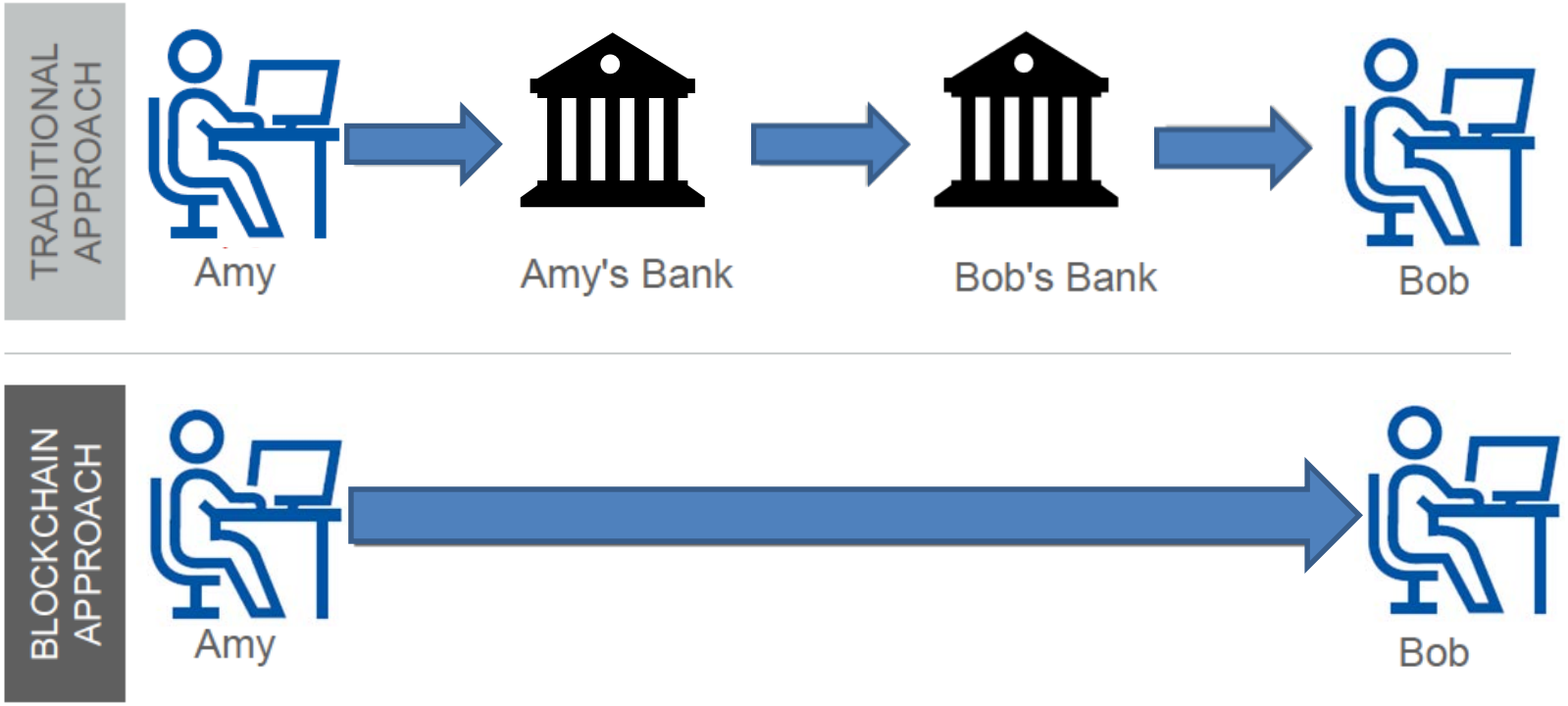
Amy sends an asset to Bob



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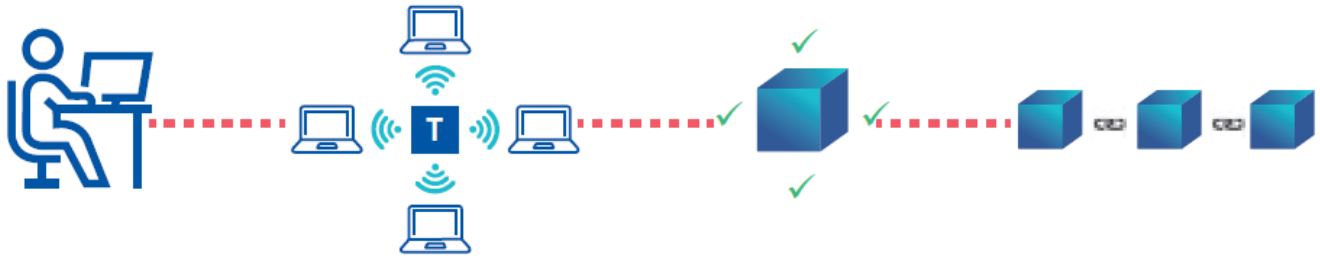

1.
Transaction submitted or requested

➜ Can involve documents, contracts, cryptocurrenty, etc.

➜ The data are "hashed" and encrypted.

➜ Possibility to encrypt documents.

2.
The transaction data T are broadcast to the peer-to-peer network.

3.
Validation (by authorized nodes only in the case of permissioned blockchains).

Validating nodes take the transaction from the transaction pool and combine it with other transactions in a block. Block validated based on the consensus protocol of the blockchain.

4.
Validated block added to the chain

and linked to the previous block in a permanent and unalterable way.

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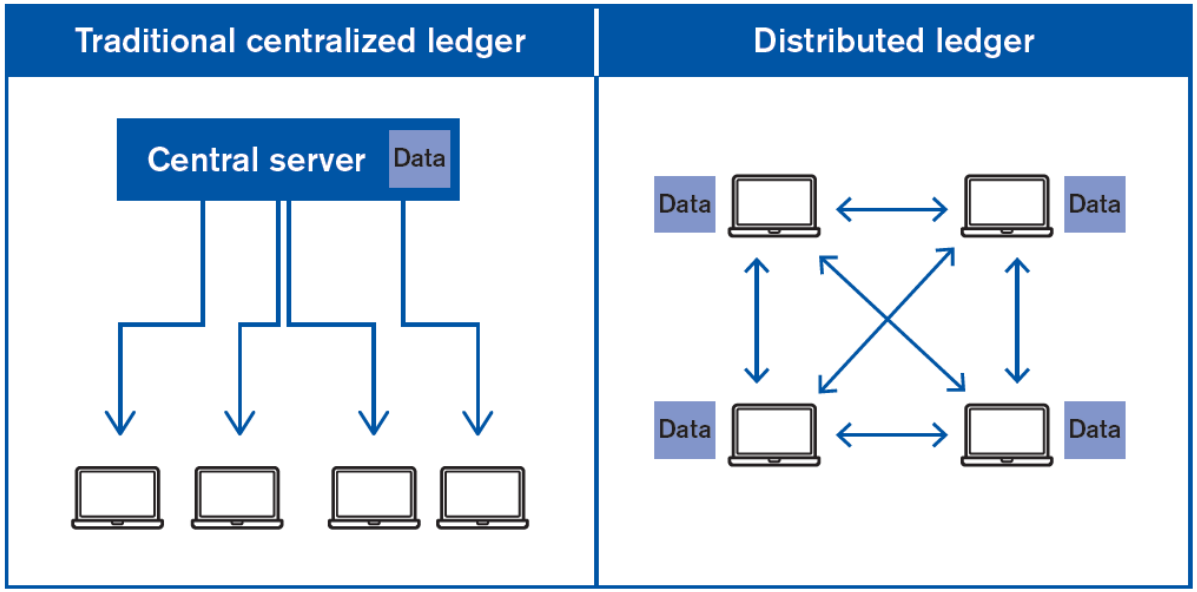
DECENTRALIZED AND DISTRIBUTED



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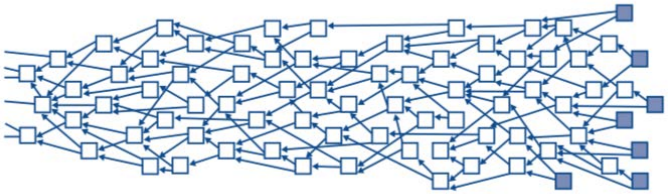
DIFFERENT TECHNOLOGIES

BLOCKCHAIN VS DISTRIBUTED LEDGER TECHNOLOGIES

vs **Transaction**

vs



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DIFFERENT TYPES OF BLOCKCHAINS

BLOCKCHAIN TYPES			Read	Write	Commit	Example
	Open	*Public permissionless*	Open to anyone	Anyone	Anyone*	Bitcoin, Ethereum
	Open	*Public permissioned*	Open to anyone	Authorized participants	All or a subset of authorized participants	Sovrin
	Closed	*Consortium*	Restricted to an authorized set of participants	Authorized participants	All or a subset of authorized participants	Multiple banks operating a shared ledger
	Closed	*Private permissioned ("enterprise")*	Fully private or restricted to a limited set of authorized nodes	Network operator only	Network operator only	Internal bank ledger shared between parent company and subsidiaries

Source: Hileman, Garrick and Michel Rauchs. 2017. "Global Blockchain Benchmarking Study." Cambridge Centre for Alternative Finance.

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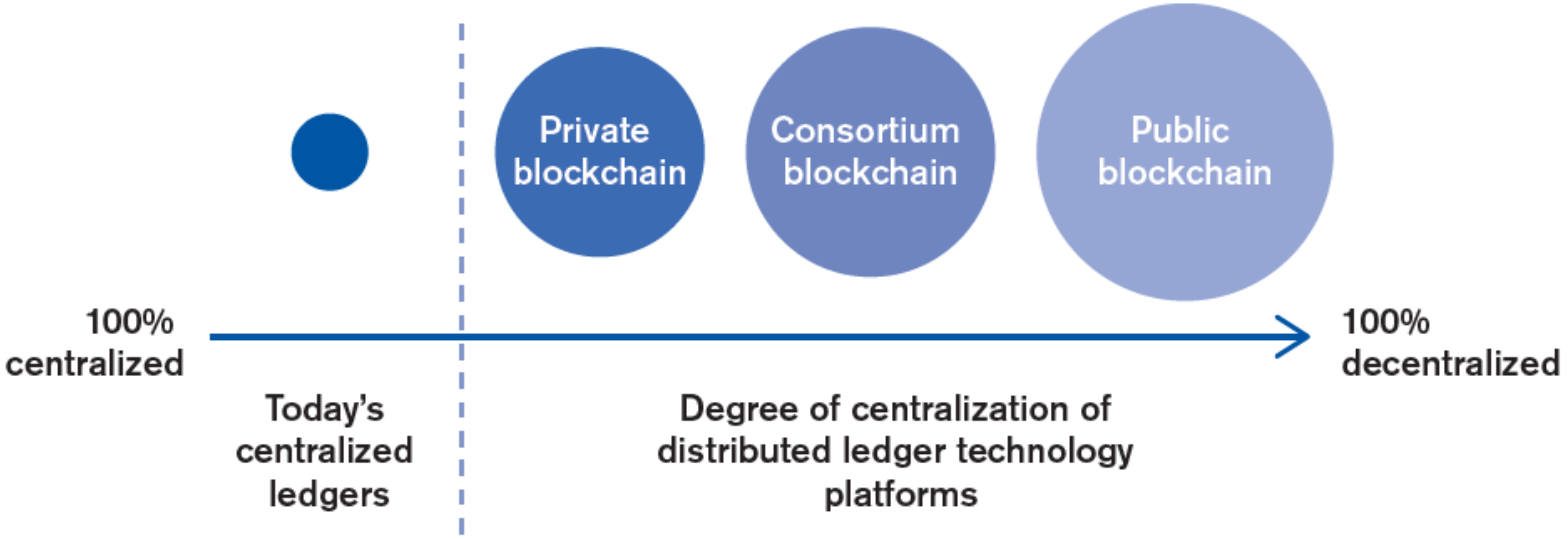
DIFFERENT DEGREES OF DECENTRALIZATION



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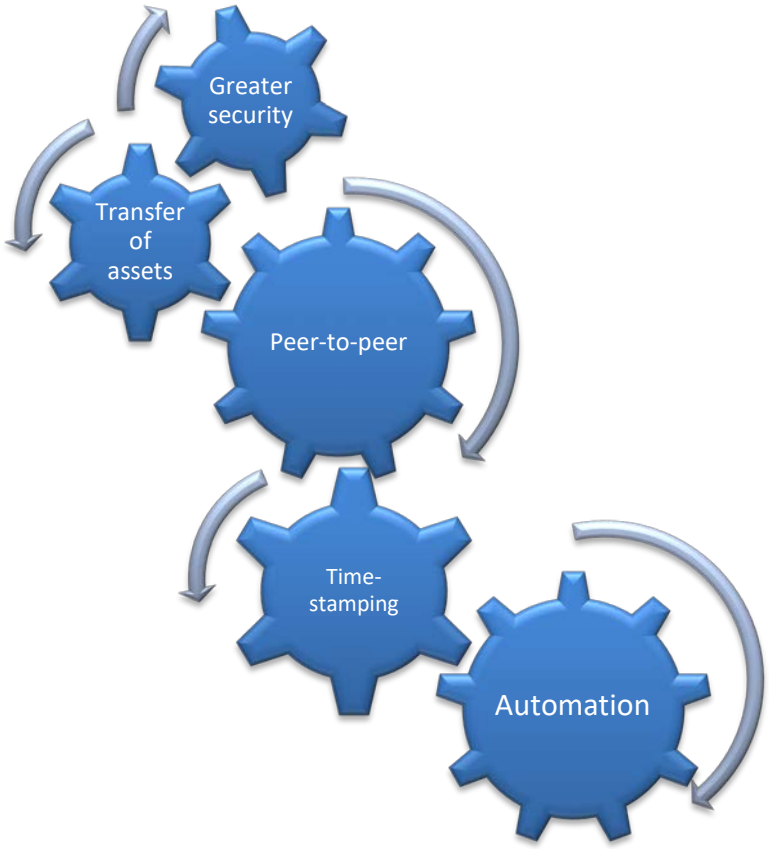
DIFFERENT CHARACTERISTICS

Cryptocurrency	Average transaction fee in US$	Average transaction time	Transaction capacity per second	Energy efficiency	Additional features
1. Bitcoin	7.32	9-10 minutes	7	Low (PoW blockchain)	
2. Ethereum	0.22	14 seconds	20	Low (PoW blockchain)	Supports smart contracts
3. Bitcoin Cash	0.32	9-10 minutes	50	Low (PoW blockchain)	
4. Ripple	0.0000024 (+ IOU fee)	3.5 seconds	1,000	High (Voting-style algorithm)	Enables IOU transactions in any currency
5. Litecoin	0.15	2 minutes	56	Low (PoW blockchain)	
6. Dash	0.30	2-3 minutes	(4,000)	Low (PoW blockchain)	
7. NEO	None (+ variable fee)	A few seconds	1,000	High (Pol blockchain)	Supports smart contracts
8. IOTA	None	No data available	500-800	Rather high (PoW Tangle)	Especially suited for IOT devices
9. Monero	2.43	2 minutes	1,700	Low (PoW blockchain)	Advanced privacy features
10. NEM	0.21	30 seconds	(3,000)	High (Pol blockchain)	Integrated reputation system

Based on November 2017 data. Source: Ohnesorge (2018)

KEY FEATURES



TRANSPARENCY

TRUST

TRACEABILITY

Smart contracts

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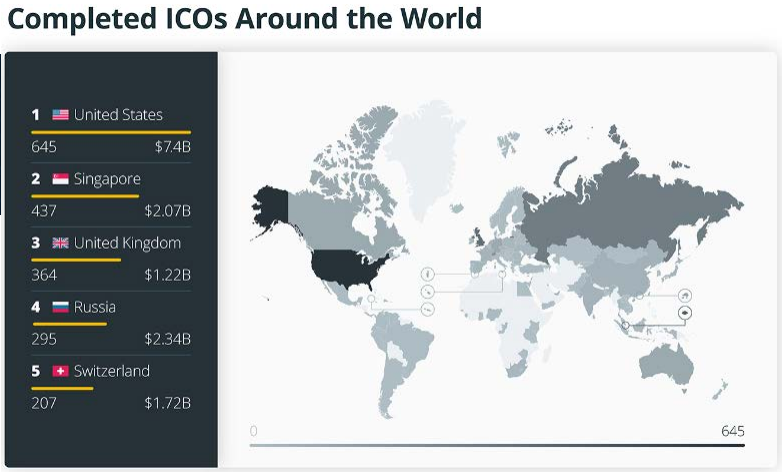
II. A GAME CHANGER FOR SME FINANCING?

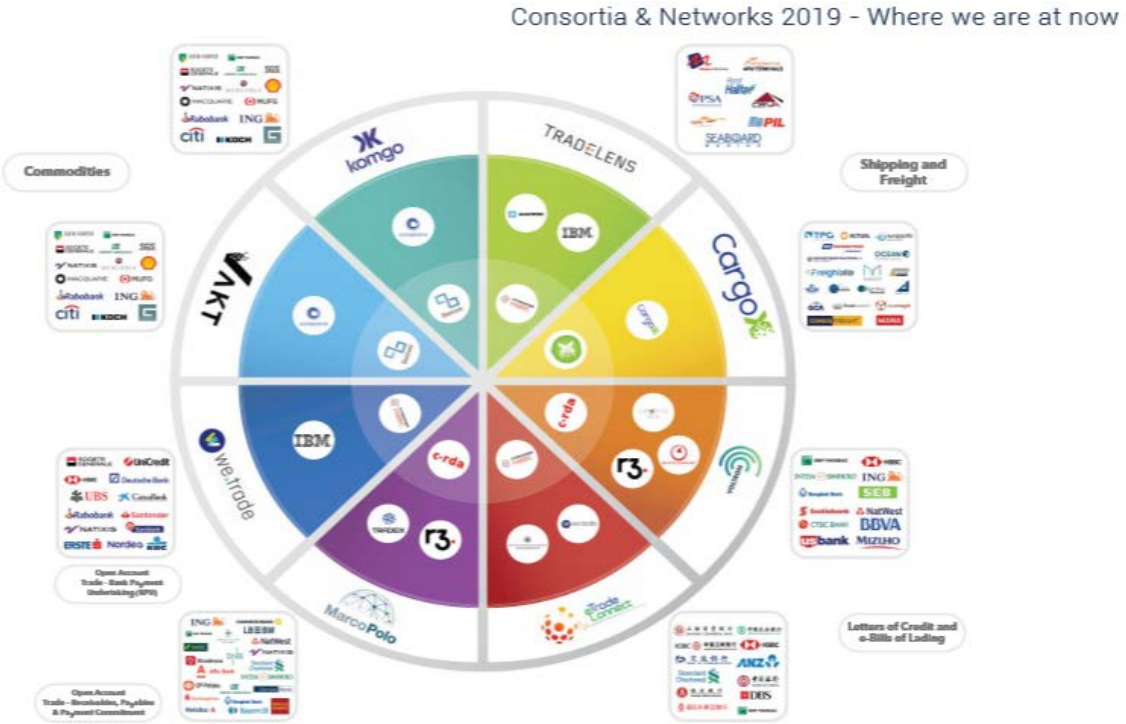
- Opens new P2P financing opportunities



Karma
global p2p loans

Trade finance

- Cost reductions and less burdensome procedures



Source: trade finance global

- Emergence of new marketplaces

→ That help SMEs build a credit history
→ Helps assess creditworthiness
→ That give access to alternative sources of financing

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- Monetization of collaterals through tokenization

FINTECH AFRICA

Sterling Bank, Binkabi, AFEX Launches world First Blockchain Commodity Marketplace

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Supply Chain Financing

Alipay's parent applies blockchain to supply chain finance

China's central bank blockchain trade finance initiative

Tradeshift rolls out blockchain supply chain payments

Trado: New technologies to fund fairer, more transparent supply chains

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Interesting opportunities, but…

- Lack of knowledge
- Uncertain regulatory framework
  - E.g. re smart contracts, P2P lending across borders
- Standardization issues

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CONCLUSION

- An evolution rather than a revolution
- Gives more options and opportunities to SMEs
- Won't solve all problems

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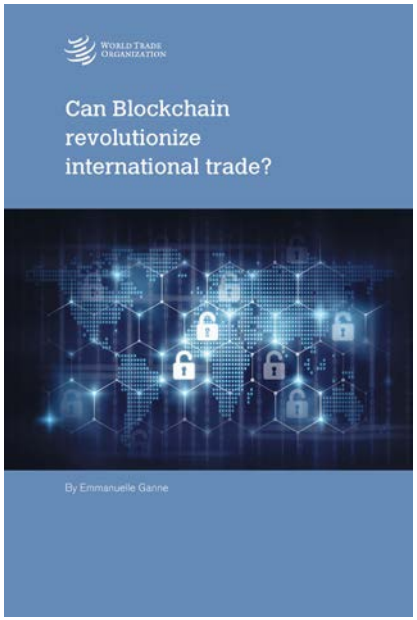
Thank you for your attention!