Blockchain disruption of business processes - KYC

Decentralized Training Series

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norbloc

A few words about me

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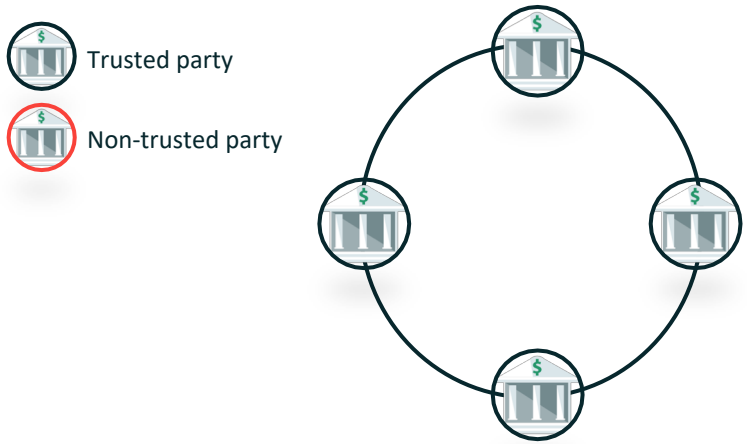
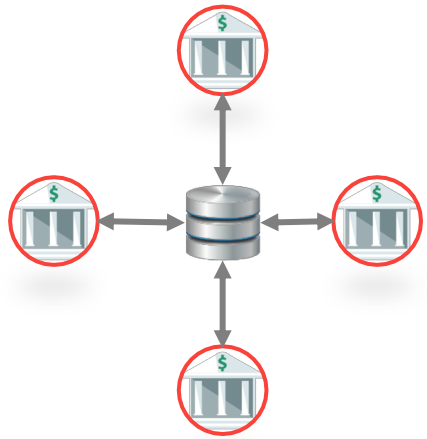
Lead Architect & Co-founder

- Lead developer in KnC Group since inception of the company (at a point the largest bitcoin miner in the world, funded by Accel Partners)
- 20+ yrs experience in enterprise development
- MSc in Applied Physics (Moscow Institute of Physics and Technology)

Until recently, there was a distinct choice between distributed database of trusted participants or central depo for wide access

	Distributed Databases	Centralized trusted depositories
		
Examples:	SQL, noSQL with replication, DHT, Torrent, …	Government Passport database, Vehicle registration, Clearing Houses, …

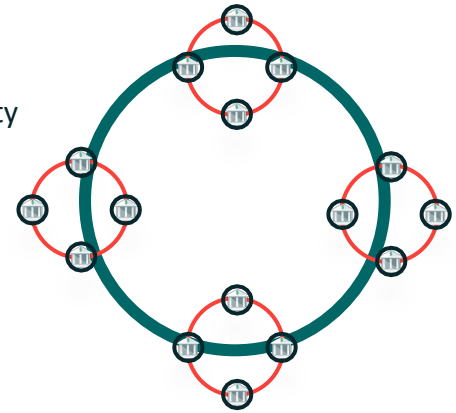
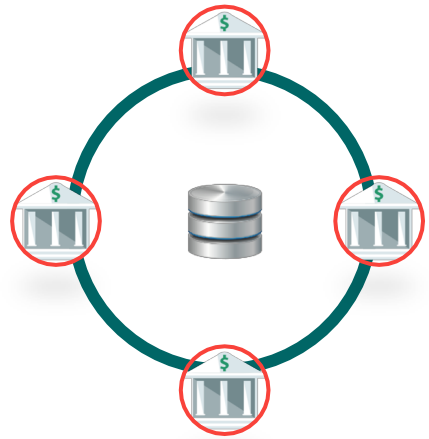
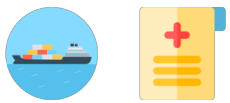
Blockchain allows the strict version control of a centralized database, with multiple distributed parties working in concert without trust limitations

In short, entire industries of trust-providers are heading to severe downsizing

B.B. (Before Blockchain) settlement house

A.B. (After Blockchain) settlement house

Blockchain decentralizes previously central functions and allows competing actors to collaborate

	Connectivity of competing actors	Decentralization of central depositories
	Trusted party Non-trusted party **Blockchain**	
		
Examples:	Medical records, Supply chains, KYC data	Money, Identity, Asset Ownership, Copyright
		

At norbloc, we are focusing on Corporate Identity with out platform Fides

Blockchain enabled

Customer uses **electronic ID login and APIs to public sources** to create his KYC file and share it with financial institutions

Bank officers review the KYC file using automated public data checks; once validated by the bank, the **KYC file of the customer is placed on a shared blockchain-based ecosystem**

Customers can **onboard any other institution using their validated KYC file**; if any updates are required, then these are propagated to all parties with access to that data

Institutions receiving an already validated file can see which bank did the validation and minimize their workload; the **validating bank can elect to receive a fee for its effort**

Even though blockchain enables our solution, its only the glue that holds together very significant pieces of the ecosystem

Blockchain architecture

- Employing blockchain technology in storing and exchanging highly sensitive and GDPR relevant data presented several challenges
- The norbloc team designed an architecture where the **blockchain does not store data** but it **controls all access to it and retains an audit log**

DRILL
(data redundancy in legal limitations)

- We have developed an **abstraction layer to allow synchronization of segments of very large datasets** (>50TBs) in a highly efficient manner
- Additionally, we facilitate that **synchronization across all major types of databases** that different institutions may be using

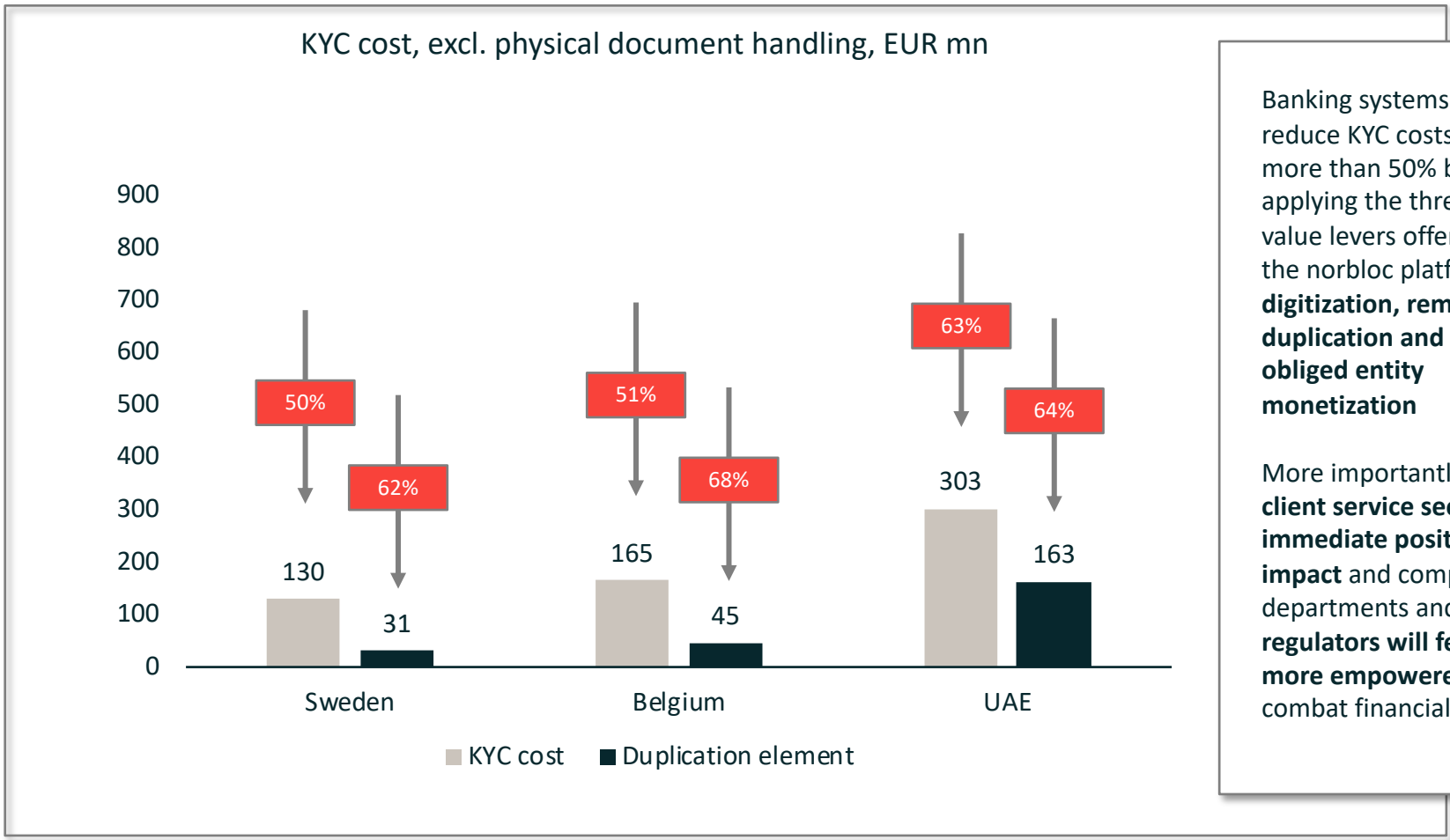
nams
(norbloc access mgmt system)

- Encryption is at the core of Fides; yet it should be employed without limiting usability of the system
- We have developed a **highly elaborate key management mechanism employing 3 layers of encryption as well as a split-seed design** to prevent data access even in cases where all parties, excluding the customer, in the platform are rogue

The impact of Fides is enormous on financial institutions and customers alike

% norbloc platform impact

% Duplication cost as share of total



Banking systems can reduce KYC costs by more than 50% by applying the three value levers offered by the norbloc platform; **digitization, removal of duplication and obliged entity monetization**

More importantly, **client service sees an immediate positive impact** and compliance departments and **regulators will feel more empowered** to combat financial crime

Note: Our research incorprorated feedback from more than 40 interviews with Bank, Regulator, Obliged Entity and Corporate Treasury personnel. For full list of assumptions, please refer to appendix

SOURCE: b-hive, Belfius AR 2016, KBC AR 2016, BNP Paribas Fortis AR 2016, Febelfin, Swedbank Corporate Compliance department; : UAE statistics; UAE Bank ARs 2016; Swedbank, Nordea, Handelsbanken, SEB 2016 AR; Bank Officer interviews; Thomson Reuters 2016 KYC survey; SCB data;

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